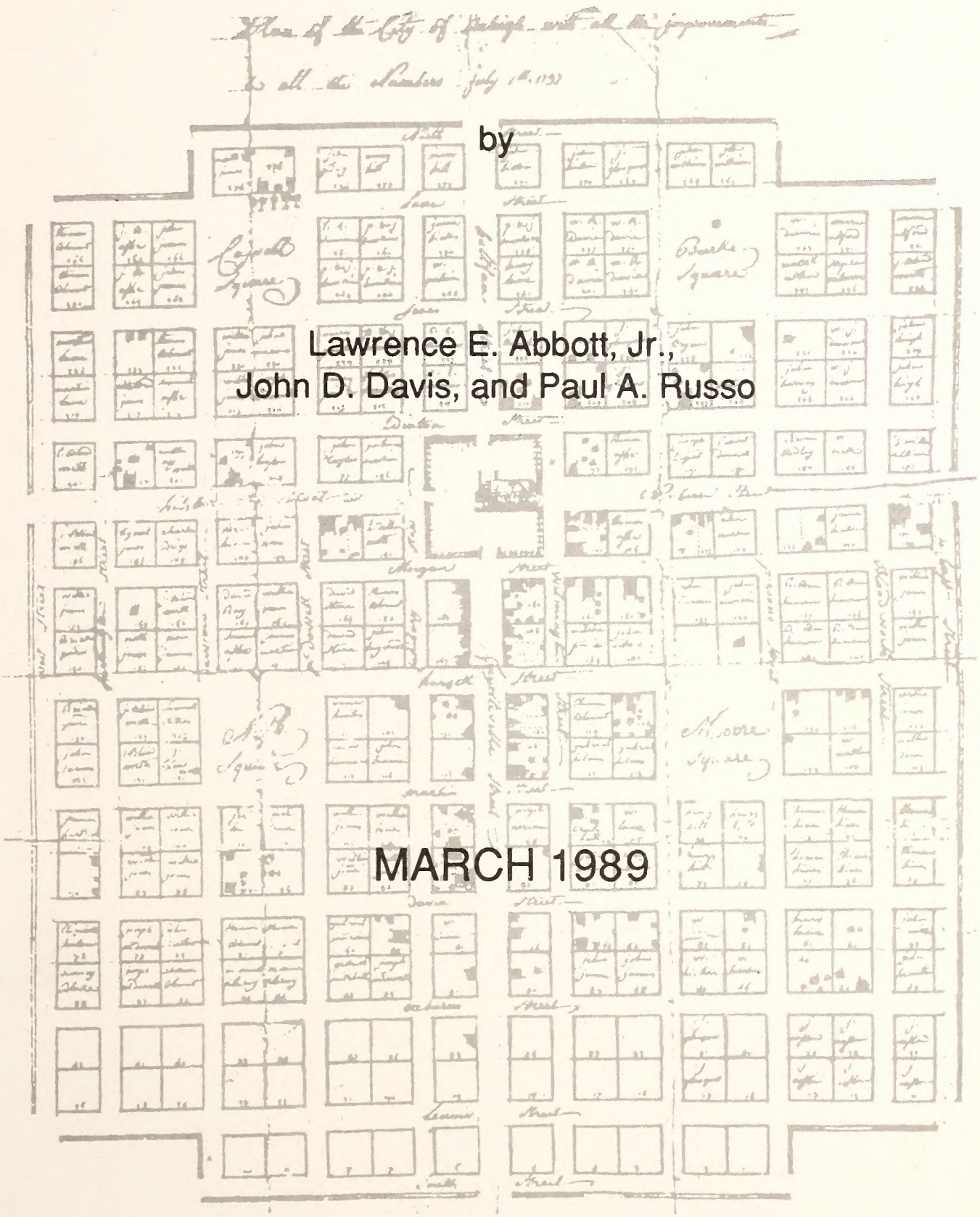
N.C. MUSEUM OF HISTORY PROJECT: TEST EXCAVATIONS IN AN URBAN SETTING



by

Lawrence E. Abbott, Jr.,
John D. Davis, and Paul A. Russo

MARCH 1989

PROJECT FUNDING AND SUPPORT PROVIDED BY THE NORTH CAROLINA MUSEUM OF HISTORY, THE MUSEUM OF HISTORY ASSOCIATES, AND THE OFFICE OF STATE ARCHAEOLOGY, STATE HISTORIC PRESERVATION OFFICE, NORTH CAROLINA DIVISION OF ARCHIVES AND HISTORY

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To all of the individuals listed above we express our sincere gratitude for your contributions. Without your help this project would not have been possible.

Lawrence E. Abbott, Jr.
Principal Investigator

MANAGEMENT SUMMARY

This report describes the fieldwork and analysis for the North Carolina Museum of History Testing Project. The project was conducted in Raleigh, North Carolina for the North Carolina Division of Archives and History through the direction of the Office of State Archaeology.

The purpose of the project was to assess archaeological resources that would be affected by the construction of the new North Carolina Museum of History. Resources known to have existed at the site area, designated 31Wa656**, included several 19th houses and associated outbuildings that had remained until their demolition in the early 1970's. The primary goals of the project included a) the documentation of any intact culture features; b) assessment of these features in terms of eligibility for the National Register of Historic Places; and c) to determine the necessity for any further work at the site.

In meeting the goals outlined for the project, five sample trenches were excavated to evaluate the site. These units were positioned in areas identified by archival research as the locations of major structures and associated outbuildings within the block. Only two of these five units uncovered historic resources that were in relatively intact condition. The resources identified included the remains of two historic structures:

1) The Vass house located at the corner of Edenton and Halifax Streets. This structure was originally constructed in 1881 and stood until it was demolished in 1971. Excavations revealed the remnants of a brick foundation and basement floor that had been severely disturbed during demolition.

2) The George W. Badger house located along Edenton street immediately to the east of the Vass house. This structure dated to an original construction date of 1843 with archival records of several additions and modifications to the main structure during its occupational period. Excavations uncovered the remains of a cement basement floor, stone foundation pillars, a foundation wall, and flagstone walk. Also, an earlier dairy feature was unearthed from beneath the cement floor. All of the features located here were well preserved with minimal disturbance. Analysis of the artifacts from the dairy feature indicated that it had been filled around the turn of the century probably during renovations of the Badger house that occurred at that time.

The three remaining excavation units failed to locate any other structural remains or significant cultural features. These units did however document the high degree of disturbance that has occurred at 31Wa656**. The most visible example of this was the widespread compression of cultural strata by the construction of the parking lot that currently covers much of the site.

In evaluation of the resources located during the project, the widespread disturbance at the site and the limited extent of preservation have severely diminished the significance and informative potential of the

resources identified. Because of these factors, none of the resources identified at 31Wa656** were deemed significant for inclusion on the National Register of Historic Places. Also, these conditions indicated that further investigation of the site would provide only limited additional information and therefore no further work was recommended.

CHAPTER ONE: INTRODUCTION

The site of the new North Carolina Museum of History occupies a two acre block in downtown Raleigh at the corner of Edenton and Wilmington Streets. This block is one of the components of the original Raleigh grid established in 1792. Historic research indicates that this property was used over time by many influential people in the history of state and federal government and the development of the local community (Angley and Crow 1988). Numerous building episodes have been documented on this property since 1792 and suggest an evolution of land usage surrounding the center of Raleigh from upper-class residential to commercial, municipal and governmental. These factors combined to promote an archeological study of this property prior to construction of the new museum.

The fieldwork for this study was carried out between August 5 and August 28, 1988 as a joint effort on the part of archeologists on temporary assignment with the State of North Carolina and personnel from the Office of State Archaeology in Raleigh. The primary goals of this project included:

A. A documentation of the presence or absence of intact cultural features within the study area.

B. A determination of the state of preservation of any intact cultural features located within the study area.

C. An assessment of the significance of any identified resources in terms of the National Register of Historic Places.

D. A determination of areas of high and/or low probability in terms of the potential for the presence of intact cultural features.

E. The collection of data sufficient to make recommendations regarding further work at the site.

F. The collection of data sufficient to formulate research questions to guide further work, if warranted.

The secondary goals of this project included:

A. An assessment of land-use patterns over time within the core of a political center.

B. The collection of data sufficient to make inferences regarding an affluent neighborhood during the late 18th and 19th centuries in Raleigh, North Carolina.

C. The collection of data sufficient to make inferences regarding the processes of urbanization and its effects on the site over time.

The project personnel consisted of John D. Davis, Paul A. Russo, Erica E. Sanborn, John W. Clauser, Stephen R. Claggett, William B. Alley, Paul White, and Lawrence E. Abbott, Jr., Principal Investigator.

The chapters that follow discuss the results of this work. Chapter Two describes the setting with a discussion of the geology and physiography of the study area.

Chapter Three presents the historic background of the study area. A great deal of historical research on this block has been done by Angley and Crow (1988). The information presented in this report draws heavily from their work. The historical research of Angley and Crow will be used in conjunction with the archeological data to provide a framework for synthesis and interpretation. Inferences will be made using both sets of data to address the research questions posed for this study.

Chapter Four provides a discussion of urban archeology and previous work within the general vicinity of the study area. This chapter will provide a body of comparative data to address the research design presented in the next chapter.

Chapter Five presents a discussion of the research design used for this study and the methods employed to accomplish the primary and secondary goals of this project. The research design is based on a set of questions designed to guide the fieldwork and analysis.

Chapter Six presents the results of the fieldwork in terms of the data collected. Each sample unit and the artifacts in association will be discussed individually.

Chapter Seven presents an analysis of the data in order to address the research questions posed for this study. The entire two acre block will be considered as the site, 31Wa656**, for this analysis.

Chapter Eight will use the results of the fieldwork and analysis to draw conclusions concerning the primary and secondary goals set for this project. An evaluation will be made regarding the significance of the site in terms of its eligibility potential for inclusion on the National Register of Historic Places. Recommendations will be made concerning further work at the study area. Additional research questions will be cited to direct this work.

CHAPTER TWO: THE STUDY AREA

The study area, 31Wa656, consists of a two acre city block immediately north of the State Capitol in Raleigh, North Carolina (Figure 2-1). It is bounded by Edenton, Wilmington, and Jones streets respectively on the south, east, and north. The Bicentennial Mall, formerly Halifax Street, and the Agricultural Building lie to the west of the study area. The center lies at UTM Northing 3962100m and Easting 713400m within the UTM Zone 17, USGS 7.5' series Raleigh West Quadrangle.

A majority of the study area is presently used as a parking lot by the State of North Carolina. The western edge is landscaped with berms consisting mainly of juniper, dogwoods, and other ornamental vegetation. The southeast corner of the block is mainly in grass with little additional landscaping. A narrow grassed median is located in the center of the parking area. This median has a regularly spaced row of maple trees and one large sycamore aligned on an approximate north to south axis. On the northeast corner of the site there is a small brick building presently used by the North Carolina Department of Justice.

Geologically, the study area lies on a band of metamorphic rock which comprises the Raleigh Belt (Brown 1985). These rocks consist of injected gneisses and include biotite gneiss and schist intruded by numerous sills and dikes of granite, pegmatite, and aplite, with minor traces of hornblende gneiss. These rocks are located between the Jonesboro and Nutbush Creek faults to the west and east respectively.

Lineated felsic mica gneisses are located west of the study area. These rocks consist of white to pink gneisses with strong lineations of muscovite-biotite streaks and prismatic quartz aggregates. Minor quantities of mica schist and hornblende gneiss also occur with these rocks. Intrusive megacrystic to equigranular granitic rocks lie on the eastern border of the study area. These foliated to massive granitic rocks are associated with Pennsylvanian to Permian (265 - 325 my old) granitic plutons found in the Piedmont of the southeastern Appalachians (Brown 1985).

The soil within the study area is associated with the Cecil series, specifically Cecil sandy loam (2 to 6 percent slopes, eroded). Cecil series consist of well-drained, deep soils characteristic of the North Carolina Piedmont uplands (Cawthorn 1970). These soils form under forest in weathered components from gneiss, schist, and other acidic rocks. According to Cawthorn a representative profile consists of the following:

Ap-0 to 6 inches below surface = dark brown, 7.5YR4/4, sandy loam; weak, fine and medium, granular structure; small quartz pebbles present.

B21t-6 to 11 inches below surface = red, 2.5YR5/8, clay; strong, fine and medium, subangular blocky structure.

B22t-11 to 24 inches below surface = red, 2.5YR4/8, clay; strong, fine and medium, subangular blocky structure.

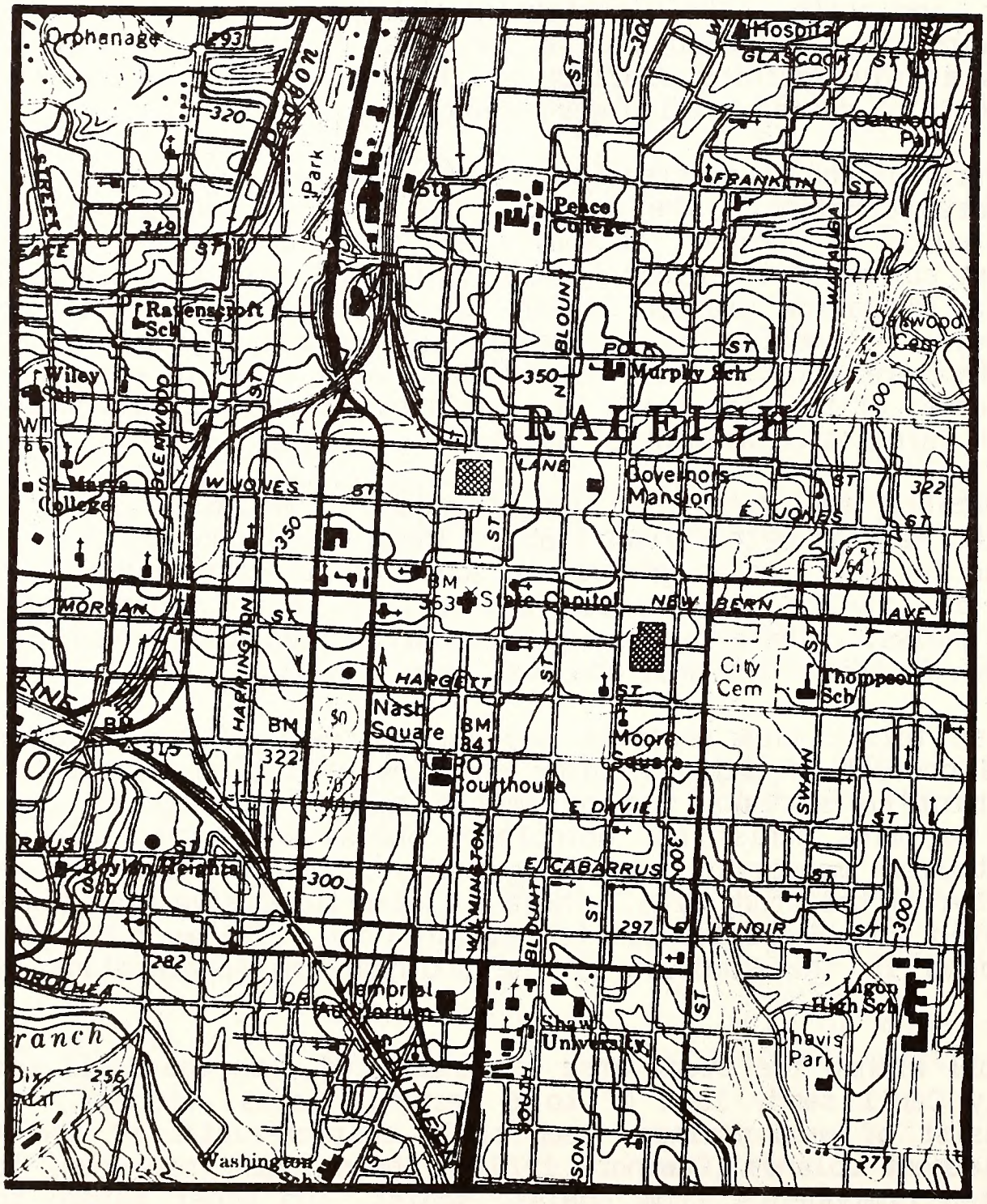


Figure 2-1: City of Raleigh, N.C.: Project Location

B23t-24 to 34 inches below surface = red, 2.5YR4/6, clay; few, fine, prominent reddish-yellow mottles; strong fine and medium, subangular blocky structure.

B3-34 to 59 inches below surface = red, 2.5YR4/8, clay loam; common, fine, prominent, reddish-yellow mottles; weak, medium and coarse, subangular blocky structure.

C-59 to 72 inches or more below surface = red, 2.5YR4/6 loam (disintegrated schist); common, fine, prominent, reddish-yellow and few, fine, distinct, dark-red mottles; massive structure (Cawthorn 1970:15).

Cecil sandy loam, 2 to 6 percent slopes, eroded occurs on broad, interstream upland areas. The soil is difficult to cultivate and crop yields are normally poor. Row crops are commonly planted in this soil, when cultivated (Cawthorn 1970).

The soils within the study area have been radically altered by urban processes. In the southern end of Trench #3 an asphalt pad extends to .11 ft below surface over compressed, coarse yellowish brown sand mixed with crushed gravel to .42 ft over unconsolidated urban fill to 2.11ft over mottled red clay. Thirty feet north, on the other end of the unit, the stratigraphy is more shallow. The mottled red clay appears at .83ft below surface and suggests that erosion, in addition to urban development has had an effect on the soils within the study area. The slope of the area is downward to the north. No natural outcrops of rock or springs were seen within the study area.

CHAPTER THREE: HISTORIC BACKGROUND

A unique and interesting aspect of the study area is the historical background of the property as a central portion of the original Raleigh grid established in 1792. The particular history of the study area is well-documented by Angley and Crow (1988) and will not be discussed in detail for this report. Consideration will focus, however, on those aspects of the history that may be seen archeologically and have bearing on the interpretations made in the chapters that follow. It should be stated that no matter how the historic background is presented, the work draws heavily from that of Angley and Crow (1988).

A 1792 plan of Raleigh shows the community laid out on a grid system with five plazas or "squares" located in the northern and central portions of the configuration. A total of 276 plots of approximately one acre each joined with the central plazas to comprise the town plan. The lots were numbered consecutively east to west beginning in the southeast corner of the grid and proceeding northward. The study area was made up of lot numbers 210 and 226, situated across Edenton Street from the northeast corner of Union Square, the site of the State Capitol. On June 4, 1792 the lots comprising the city of Raleigh were auctioned to the highest bidders. This auction took place on lot 210 suggesting that it was the first actually sold in Raleigh (Angley and Crow 1988:2).

In the mid-1790's a law was passed requiring state officials to reside in the capital. This requirement coupled with the extremely poor conditions of the streets during the early years of Raleigh's history served to increase the desirability of those lots close to Union Square. A map dating to 1792 shows John Williamson and John Knight as the first owners of lots 210 and 226 repectively. While lot 226 remained undeveloped, Williamson apparently built several structures on lot 210 between 1792 and 1797. The exact configurations of these structures are unknown; however, most of the early houses in Raleigh consisted of "small frame dwellings of from two to four rooms, with one or two fireplaces, having small yards with separate outbuildings, wells, and vegetable gardens" (Angley and Crow 1988:3). A map dating to 1797 shows six structures on lot 210. One substantial structure with a fireplace on the east wall was located on the southwest corner of the property facing Edenton Street. Another structure with a fireplace on the west wall was located on the southeast corner of the lot facing Edenton Street. A smaller structure with a fireplace on the east wall was located on the western border of the property facing Halifax Street. Three small dependencies were located in the center of the property.

Lot 210 was sold by Williamson in 1797 to John Haywood of Edgecombe County. Haywood, at that time the state treasurer, made improvements on an existing residential structure. It is assumed that this structure was the one located on the southwest corner of the property. Haywood renovated the interior of the structure and added two cellars, but owned the lot for only three years before selling the property to John Ingles in 1800. Before moving, Haywood removed one of the dependencies, possibly the kitchen, to his new residence at Haywood Hall on New Bern Avenue (Angley and Crow 1988:6).

Ingles retained lot 210 until 1807 when he sold it to silversmith Jehu Scott. At the time the lot was purchased by Scott the property contained "a dwelling-house, kitchen, store and compting room, two cellars, stable and lot, smoke-house, and garden" (Angley and Crow 1988:6). The Scott family lived on lot 210 for approximately 23 years.

Lot 210 was owned in part by several individuals between 1830 and 1838. Ownership of the lot was consolidated in 1838 by Delia W. and George E. Badger. George Badger was a lawyer, judge and politician who served after 1838 as secretary of the Navy and a United States senator. By 1847 the Badgers had built a large structure in the southcentral portion of the property facing Edenton Street. A map dating to 1847 shows a large structure consisting of a narrow central portion flanked by large wings on the east and west. The wings extended northward away from Edenton Street. According to Angley and Crow, an existing structure may have been incorporated into the structure that appears on the 1847 map (1988:10). The incorporated structure may have been the kitchen built by John Ingles to replace the one moved by Haywood in 1800. A smaller structure was still located in the southwest corner of the property and apparently served as Badger's law office. It is quite possible that the structure used by Badger for his office was the same structure built by Williamson and improved by Haywood. The Badgers lived on lot 210 through the Civil War. In 1863 George Badger had a stroke which left him a mute invalid until his death in 1866. His wife, Delia, continued to live in their spacious dwelling until her death in 1876. A period of litigation between the Badger heirs followed Delia's death which ended in the division of lot 210. It is therefore possible that the Badger house was vacant between 1876 and 1879.

In 1879 lot 210 was divided between Badger's daughter, Annie H. Faison, a son, Thomas Badger, and William W. Vass. By 1882 Thomas Badger had built a residence facing Wilmington Street and Vass had torn down George Badger's law office to construct a large Victorian structure. Annie H. Faison and her husband Paul F. Faison resided in the original Badger house.

The Vass house was located at the corner of Edenton and Halifax Streets. The structure was both ornate and spacious and had a substantial basement. One portion of the basement consisted of an elaborate room used by Vass to entertain his friends, a sort of gentlemen's social club. This room was located on the west side of the structure underneath the living and dining rooms (Fran Myers, personal communication, 1988). The Vass house remained intact until 1971 when the entire structure was pulled down to make way for construction of the Bicentennial Mall Complex on the former location of Halifax street.

The Faison's occupied the Badger house until 1898. Paul Faison died in 1896 and Annie followed two years later. A map of 1896 shows the configuration of the Badger house with the inclusion of a back porch. Whether the back porch was added by the Faisons or was an original feature of the Badger house is unknown. In addition to the house itself, three outbuildings were located to the rear of the structure with a walkway leading to the back of the house from the largest of these. By 1896

thirteen structures were located on lot 210. Seven of these buildings were domiciles, and the balance were outbuildings of some sort. The historic record is unclear as to the ownership of the Faison house between 1898 and 1909. A 1903 map shows the Faison house listed as a domicile, although the configuration had changed significantly. The two wings of the original Badger house had been removed, the back porch was enclosed, a porch added to the front and at least three rooms had been appended to the rear of the structure. The Faison house in its 1903 configuration was to pass back and forth from private residence to boarding house until 1965 when it was acquired by the state government for office space. The structure was torn down with the Vass house in 1971.

Lot 226 was located north of lot 210 and was developed much later. It was not until 1817 that Moses Mordecai improved the property with a structure. The exact location on the property and the configuration of the structure is unknown, but by 1834 and after several additional owners, there was a spacious dwelling owned by Fabius J. Haywood, the son of John Haywood, fronting Halifax Street. By 1838 Haywood had converted the structure into a private school and an 1847 map shows two structures on lot 226. One structure was that of the Haywood house, the other was a rectangular building located in the northeast corner of the lot. Sometime during the 1870's the structure in the northeast corner was removed and a large structure belonging to Fabius J. Haywood, Jr. was built in the northwest corner of the lot. Maps dating to 1881 and 1882 show between 6-8 structures on the lot. By 1896 at least 16 structures were located there. By 1909 both lots 226 and 210 consisted of domiciles with a total of six located along Wilmington Street, four facing Halifax street and three facing Edenton. That distribution of houses remained unchanged except for relocation and removal of various outbuildings and the construction of the YMCA on the southeast corner of the study area in 1912.

By 1950 the study area was used for an assortment of activities including private residences, rental and boarding houses, commercial property, and governmental offices. Abandonment of the area was nearly complete in 1970 and by 1971 all but one structure had been demolished. In 1972 the study area was graded and converted into a gravel parking lot, which remained unpaved until 1976 and the construction of the Bicentennial Mall. Presently, the study area consists of a substantial asphalt parking lot flanked on the west by the Bicentennial Mall. One structure remains in the northeast corner of the property and houses the North Carolina Ports Authority and the Department of Veterans Affairs.

The history of lots 210 and 226 is one of gradual transformation of land usage from residential to public use. Early in the history of the study area lots were used by the wealthy and influential as residential property. Presently the property is used by the public for parking. As will be discussed in the following chapters, this transformation over time mirrors a set of processes that are linked to the urbanization phenomenon in general and the particular history of the development of Raleigh in specific terms.

CHAPTER FOUR: PREVIOUS WORK

Because the study area lies within that complex microcosmic entity termed a city, the discussion previous research will be divided into two sections. The first will review the theoretical background regarding the process of urbanization. This discussion will include aspects pertaining to Urban Anthropology and its subdiscipline, Urban Archeology. The second section will consist of a discussion of previous work carried out within the general vicinity of the study area.

THE DYNAMICS OF URBANIZATION: AN ANTHROPOLOGICAL PERSPECTIVE

There has been in the past some degree of uncertainty regarding the difference between that which is "urban" and that which is a "city" (Gulick 1968; Leeds 1980; Zeder 1988). Quite often it appears that ones perspective concerning urban vs. city is dependant on how the urban environment is defined. The controversy basically boils down to two views of urbanization and the city. One view is microcosmic the other is macrocosmic. Jones (1978) advocates a macrocosmic perspective for studying the urban phenomenon. He cites four basic assumptions concerning the criteria for a viable macrocosmic perspective. These include:

1. any urban society represents an open system involving information and energy exchanges with external environments.

2. mechanical models should be excluded in favor of complex adaptive models.

3. adaptive systems maintain exchanges of information and services with the external environment, which provides the basis for self-regulation.

4. the urban area is a unit in a hierarchical system of functionally interconnected structures. (Jones 1978:24-25)

To follow this through one needs to answer two questions, what is involved in the process of urbanization, and what is a city?

Urbanization is commonly viewed as a dynamic process in space and time (Price 1978; Klaassen and Scimeni 1981). Price (1978) sees it as an ecological and demographic process. She states,

> "Whatever else the term may mean, it [urbanization] refers to a particular kind of settlement pattern, a reflection of the adaptation of a human population to its environment. More specifically, urbanism results from a combination of three subprocesses, each of which may in certain circumstances occur independently of the others. Only when they occur together, intensifying and reinforcing each other, however, does the formation of an urban community result" (1978:52).

Of the three subprocesses, the first is population growth. The second is the nucleation of population aggregates relative to the area of logistical

support. The third in this scenario is population differentiation in the form of social stratification, socioeconomic differentiation, and specialization of production based on a food surplus economy (Price 1978:52).

Zeder (1988) sees specialized economy and centralized decision-making processes as central to the theme of urbanization. By specialized economy Zeder means,

> "a set of economic relations in which there is external differentiation between different economic activities, and internal differentiation within related activities whose conduct is characterized by segregation in personnel, timing, and locale" (1988:3).

This idea assumes, of course, a surplus of food and the existence of a group to produce and sustain a range of other specialists that render goods and services. In the true urban sense no one group of specialists, not even the food production specialists, is entirely self-sufficient. Each group is dependent on the others for survival. Each group must either produce a surplus of some commodity to exchange for that which is not produced personally, or offer some service in exchange for goods and other services. This type of economy left unregulated would quickly become chaotic without some means by which to regulate the distribution of goods and services. The centralization of decision-making processes puts control in the hands of a few and 1) brings order to the system, 2) allows the producers of goods and services to concentrate on creating a surplus, and 3) somehow makes the whole thing work.

Fundamental to the explanation of the process of urbanization is an understanding of how these factors are converted into the distribution of population aggregates over space and time. Cities, therefore, exist as a part of the wider ecosystem of the urban macrocosm.

According to Gulick, the word "city" has been used as a generic name to characterize settlements of all sizes (1968:554). He questions the application of the same generalizations and assumptions to cities of different size and complexity. Using New York and Greensboro, North Carolina as an example, Gulick points out that lifestyles, social sentiments, and problems are different between the two areas yet both are called cities. However, by his own definition Greensboro would not be on the same level as a fishing village in West Mexico that is centered only around self-sufficiency. It therefore seems that the concept of the city should be based on a range of phenomena that mirror the range of sizes and complexity of settlements. Moore (1975) comes close to this by viewing the city as a process of change. He views the city as an entity, preferred by humans for its adaptability and distinguished by continuous change. According to Moore,

> As an adaptation to survival in the evolution of culture, the success of the city derives from a central attribute which is that all the things man does are done here more intensively, more precisely, more profoundly, and in more varied ways, because of the profusion of alternate choices provided by an abundance of

> human power and skill within a territory and system that allows easy availability of all the parts to the whole (1975:019).

To Moore the essence of the city lies in the integration of varied and dissimilar cultures coming together to form a new creative process. This new process is what he calls urbanization (Moore 1975:020). Moore uses Steward's (1955) levels of sociocultural integration to study the different cultures within a single complex system. He sees the context of the city as "a different rate of change based on different modes of integration at the urban level as distinguished from integration at other levels of culture" (Moore 1975:020). He sees diversity in close proximity as the fundamental attribute of the city.

From the discussion above the difference between the process of urbanization and the city is one of degree rather than kind. It is more the question of whether the terms are used in a micro or macro sense. Differences between the two levels of abstraction center around the degree of structural complexity and internal dynamics when considering a city as a finite entity as opposed to viewing a city as the manifestation of the process of urbanization. Some conclude that absolute definitions for "urban" and "city" do not exist due to the variation both within and between urban areas (Rothschild and Rockman 1982:4). The next section will discuss how urban archeology attempts to further an understanding of these processes.

THE DYNAMICS OF URBANIZATION: THE ROLE OF URBAN ARCHEOLOGY

By use of the term "dynamic" one assumes that change is a component of urbanization. Change is also assumed to occur over time and space. In certain cultures the written record provides a method by which to document change up to a certain point. Beyond that point much of the information is either unrecorded or lost. The use of archeology in conjunction with written records, in these situations, provides the best means by which to document the dynamic aspects of the urbanization process. The use of archeological methods serves to fill in some of the gaps left by the written record. The ultimate goal of all of this being to test models to generate laws governing this process.

Urban archeology is defined by Staski as "the study of the relationships between material culture, human behavior, and cognition in an urban setting" (1982:97). An urban setting is defined as "a permanent location in which the density of settlement and the amount of human energy expended per unit of land area are considerably greater than in the surrounding region" (Staski 1982:97). Staski makes the distinction between doing archeology "in" the city and "of" the city (1982:97-98). Archeology "in" the city uses a concept of the city as an environment to address research questions in the urban setting, basically a microcosmic approach. Archeology "of" the city conceptualizes the city as both an environment and subject of study. This approach uses archeological methods and techniques to further the understanding of the dynamic processes that govern urban development, a macrocosmic perspective.

The merits of attempting archeology "of" the city have been discussed by Fairbanks (1968) and Salwen (1971, 1978). Salwen (1978) concluded that archeological methods, when applied to urban contexts, provided useful information from areas previously thought to be too disturbed. The archeological techniques applied to urban areas were described as being somewhat different from the more traditional field techniques (Salwen 1978). According to Salwen, urban research methods would involve:

> "very strong reliance on preliminary documentary research, deeper and more intensive subsurface testing, often involving use of a variety of power tools, before major excavations are started, and the ability to handle extremely complex stratigraphic situations" (1978:458).

Salwen also concluded that the theory-building and testing potential of archeology is tied to the work of urban anthropologists and specialists in social geography and sociology.

Rothschild and Rockman cite four characteristics of urban areas that have relevance to archeologists: 1) landuse features, 2) political and administrative features, 3) economic features, and 4) social heterogeneity (1982:4).

Landuse Features

It is generally accepted that cities are more densely settled than the surrounding areas. Therefore, measures of population size and density are possible from the analysis of settlement pattern data. Land usage patterns directly reflect the density of population aggregation and can be measured easily in cases where historic maps are available (McAdams 1980, Rothschild and Rockman 1982, Rubertone 1982). According to Rothschild and Rockman,

> "As a city becomes more urban, its land tends to be used by more people. This tendency may be manifested in several ways. Land may be subdivided into increasingly smaller parcels. Additional land may be claimed by landfill operations in adjacent submerged and swampy areas. With improvements in architectural technology, land also may be recombined into larger parcels and built upward into multistoried skyscrapers" (1982:6).

One set of land use categories has been established by Staski (1982) to organize the way in which an urban area is distributed across the landscape. These include:

1. Single-family dwellings
2. Multifamily dwellings
3. Mobile dwellings
4. Areas of commercial use
5. Areas of industrial use
6. Areas of public use
7. Streets
8. Vacant land (1982:104).

Single-family dwellings include residential houses and outbuildings. Approximately 33% of all urban land is taken up with single-family dwellings (Staski 1982). The percentage of land area devoted to this unit tends to increase with the distance from the core of a city.

Multifamily dwellings include any structure built to house more than one family group in separate units, an apartment. Approximately 3-5% of all urban land is taken up by this category. Multi-family dwellings are generally located near the core of an urban area within easy access of transportation facilities and major employers (Staski 1982).

According to Staski (1982:109), little information is available on mobile dwellings due to the ephemeral nature of their existence and the lack of any structural foundations.

Areas of commercial use include those establishments that produce goods and distribute services to the general population and the surrounding areas. These areas are located in close proximity to high traffic areas and logistical support. According to Staski (1982), these areas tend to cluster within central business districts or along major access routes and follow a spatial arrangement characterized by central place theory (Christaller 1966).

Areas of industrial use include places where raw materials are taken and distributed or processed into products (Staski 1982:110). Approximately 11-12% of all urban land space is devoted to this category of land-use.

Areas of public use include recreational areas, schools, cemeteries, churches, public/civic buildings, and parking areas (Staski 1982).

According to Staski, streets comprise a separate category because of their wide distribution across the urban landscape (1982:115). Streets often precede and facilitate urban growth in an area.

Approximately 20-33% of the area within an urban setting is vacant land (Staski 1982:116). Land is defined as vacant when it is put to no obvious use. Vacant land is present in urban areas due to a variety of reasons ranging from environmental constraints to abandonment to land reserves.

Rubertone (1982) gives another set of definitions for urban land-use. These include:

1. Residential -- both single and multifamily dwellings.

2. Commercial -- commercial, industrial and storage facilities.

3. Mixed residential/commercial -- includes combinations of various proportions of categories 1 and 2.

4. Outbuildings -- any auxiliary structures associated with residential units.

5. Unspecified -- buildings with no documented or inferred function.

6. Civic -- public/governmental/administrative/religious buildings.

7. Unoccupied -- vacant land. (1982:120)

Rubertone uses these categories to model changes in urban land use over time in Providence, Rhode Island (1982:118). She was specifically interested in how changes were reflected within her study area and how the changes could be seen in localized land use and artifact deposition over time (Rubertone 1982:119). She used quantitative measures to calculate the percentage of land use during particular temporal phases in Providence, notin several processes that were operative over time, including intensification of land use, increased competition for commercial space, residential secession, and general increase in population density (1982:140).

Rothschild and Rockman (1982) also used quantitative methods to measure population density by correlating square footage of modified land to unmodified land. They defined modified land as that occupied by buildings, features, utilities, and paving. Agricultural modification (plowing, terracing, etc.) would not be included in this measure (Rothschild and Rockman 1982:12). The correlation was measured by the formula:

$$Ml = \frac{m}{u}$$

where Ml = ratio index of modified to unmodified land
m = square footage of modified land
u = square footage of unmodified land.

Rothschild and Rockman feel that the use of quantitative measures will be useful to build a body of comparative data to evaluate urbanization within and between cities; but admit the usefulness of the measures has yet to be tested (1982:13).

One archeological expression of intensive use and reuse of urban land space is manifest in the disturbance and/or destruction of deposits, the creation of complex stratigraphy, and other post-depositional site formation processes (Schiffer 1972, 1976; Wilk and Schiffer 1979; Rothschild and Rockman 1982). Consecutive building episodes, usually the construction and alteration of foundations and basements, act to severely mix and destroy existing resources (Rothschild and Rockman 1982). The installation of subterranean utilities also serves to destroy cultural resources. Quite often this destruction is wide spread because of the tendency to align utilities along the paths of streets.

A survey of vacant lots in Tucson, Arizona revealed these areas as locus for a set of activities (Wilk and Schiffer 1979:531). These activities were revealed in various refuse disposal patterns and transformation patterns. The activities represented included:

1. Travel -- trails and paths reveal linear distributions of various forms of small, manually transportable refuse.

2. Refuse Disposal -- bulky refuse often occurs at the termination of abandoned roads.

3. Storage -- orderly storage/abandonment of usable items (lumber, bricks, gravel, etc.) occurs on vacant lots.

4. Automobile-Related Uses -- disposal of junked cars occur in close proximity to access roads.

5. Children's Play -- construction of play houses, bicycle paths, etc. and the associated artifact patterns are attributed to the action of kids.

6. Adult Recreation -- evidence of alcohol consumption, sexual, and illegal activities are evident in specific types of artifacts.

7. Camping -- evidence of transient campsites can be found on vacant lots. This may be associated with children's or adult play, but may also be the result of vagrancy.

The value of this study was its illustration of patterned artifact distribution and the role of various transformation processes in site formation. This information is useful when applied to interpretations of formation processes for historic, as well as other, types of archeological sites. Hopefully it will reduce erroneous interpretations.

One final expression of intense land use is a high density of artifacts. In an urban setting miscellaneous materials (wood fragments, coal, charcoal, brick and mortar fragments, miscellaneous rocks and melted glass) occur in great frequency. The information gained from this class of artifacts concerning the distribution of structures and various transformation processes (evidence of fires, activity areas, etc.) is useful; however, the collection of these materials, in most urban cases, may not be feasible due to the massive quantities involved. In most cases some sort of sampling of this class of artifacts may be necessary (Rothschild and Rockman 1982:7).

Administrative Features

According to Rothschild and Rockman, urban development is characterized by a "hierarchical, bureaucratic system of management, with a political mode replacing a kinship mode of organization" (1982:8). In urban settings this mode is often located centrally in large, special-use buildings. The spatial distribution of these buildings become more diverse as the complexity of urban area increases. Centralized control is also evident in rigidly structured community layouts (Kubler 1978; Markman 1978).

Economic Features

Since urbanization assumes a specialized production of goods and services, it follows that an economic characteristic of the city is its function as a marketing center (Rothschild and Rockman 1982). Using central place theory as a model, cities are seen to function as focal centers from which goods and services are distributed on a regional scale. The artifact patterns should mirror a market economy with an access to a wide variety of imported and locally-made goods and concentrations of discrete assemblages that represent specialized industries (Rothschild and Rockman 1982).

Social Heterogeneity

The urban setting is a magnet for various types of people from different ethnic and socioeconomic backgrounds. A great deal of work has been done recently, with various results, attempting to correlate artifact patterns with ethnicity (Baker 1980; Bridges and Salwen 1980; Deetz 1977; Klinghofer 1987; Schuyler 1980; Vlach 1976). Others have studied artifact patterns from a socioeconomic perspective (Drucker 1981; Miller 1980; Otto 1977; Spencer-Wood and Riley 1981; Spencer-Wood 1984).

According to Spencer-Wood and Riley, "Consumption patterns are the result of the complex interaction of a large number of variables including income, occupation, ethnic affiliation, family size, proximity to manufacturers of goods, prices of goods, social status, literacy, values, and individual preference (1981:40). They suggest the use of an urban socio-economic model which compares the consumption patterns of numerous family groups according to ethnic and occupational categories.

Miller (1980) derived ceramic price scale indices to measure the mean value of surface decoration attributes on 19th century whiteware ceramics. Spencer-Wood (1986) applied Miller's price scaling indices to ceramics from various sites in Massachusetts, concluding that "ceramic consumer choice profiles, especially those for teaware, are strongly related to socio-economic status" (1986:38).

In general, the wide range of variation expected within an urban setting should be reflected in the distribution patterns of artifacts and the recorded land use patterns. Demographic and administrative features should be seen in land usage and settlement patterns, while economic features and social heterogeneity should be inferred from the distribution of artifact patterns (Rothschild and Rockman 1982:4).

With the increase in urban development the role of urban archeology has greatly expanded. The potential for this relatively new subdiscipline to contribute to the theoretical development of urban studies is great. As the research questions become better defined, new models will be generated and tested using appropriate survey and sampling procedures to increase the range of understanding among social scientist interested in the urban phenomenon.

PREVIOUS WORK WITHIN THE VICINITY OF THE STUDY AREA

Several archeological projects have taken place within the general vicinity of the study area (Schwartz 1972; Garrow 1975; Clauser 1982, 1984, 1985, 1987; Hargrove 1985a, 1985b, 1987; and Garrow et al. 1988). Many of these projects resulted from cultural resource management legislation (Hargrove 1985, 1987; Clauser 1987; and Garrow et al. 1988).

Test excavations at the White-Holman house (Hargrove 1985a) did not reveal any intact remains of eighteenth or nineteenth century features other than the structure itself. Intensive urban development was apparently responsible for the destruction of a majority of the early features within the project study area (Hargrove 1985:15-16). The historical background of the White-Holman house did, however, reveal that the land use patterns within the area remained basically residential until approximately 1950 (Hargrove 1985:8). The property, lots 175 and 174 of the original Raleigh grid, was owned initially by William White, who was very active in state and local politics between 1798 and 1805. White was North Carolina's second Secretary of State and Raleigh's first popularly elected mayor. His house and property were located two blocks east of Union Square and the state capitol and property remained within the White family until 1884 when it was subdivided and sold at auction.

The White house was bought in 1884 by William Calvin Holman, a wealthy businessman in Raleigh. By 1896 numerous residential structures were located on the two lots (Hargrove 1985). The residential flavor of the block remained intact until approximately 1950. After this time much of the property was acquired by the City of Raleigh and transformed into public parking areas. Despite the lack of archeological context, the background research done by Hargrove (1985) documents urban land use patterns over time within an affluent neighborhood in Raleigh.

Test excavations at Moore Square (Hargrove 1985b) revealed a different pattern of land use. Like the results of excavations at the White-Holman house (Hargrove 1985a), twentieth century urban development had severely impacted earlier features; but as before, the background research revealed some interesting information. Moore Square consisted of Lots 128, 129, 112, and 113 of the original Raleigh grid. This area is located two blocks southeast of Union Square and the state capitol. The first owner of Lot 128 was James Mitchell who established a tavern in his dwelling in 1792 (Hargrove 1985b:5). It was in this section that the business district of early Raleigh began to develop. By 1847 Lots 129 and 113 had several commercial buildings. During this time the other three sides of the square were middle-class residential. After 1880 the area became used more for commercial purposes. The business district expanded along Hargett and Martin Streets while Blount Street remained basically residential. The area became notorious for its large number of saloons and illegal liquor-related activities during the state-wide Prohibition of 1909. The area along Hargett Street managed to survive this notoriety and became a focal point of Black owned businesses around 1920. The area in general remained a profitable business district until approximately 1950. The area began to decline after this time and is presently one of the city's high crime areas, a victim of urban decay and subject of revival and redevelopment efforts on the part of the City of Raleigh.

CHAPTER FIVE: RESEARCH DESIGN AND METHODS

The primary goals of this project were listed in Chapter One of this report. These goals and the methods used to accomplish them were designed to collect information adequate to make recommendations to the State Historic Preservation Officer and the North Carolina Museum of History concerning the National Register eligibility potential of the study area, 31Wa656**. These recommendations will be based on the following criteria:

A. The presence of intact subsurface and/or occupational features likely to yield data on subsistence or architecture of the period 1797-1938.

B. The integrity of surface and/or subsurface artifacts and ecofacts likely to yield information regarding diet, subsistence (including specialized economic activities), or religious activities of the period 1797-1938.

C. The presence of patterned variability in either cultural features, artifacts or ecofacts within the study area likely to yield information on intra-community economic or social differences, and/or attendant extra-community social and economic relations during the period 1797-1938.

D. The presence of horizontally or vertically stratified remains likely to yield information on changing subsistence, social relations or ideology during the period 1797-1938.

E. The presence of intact subsurface features relating to Afro-Americans or Native Americans.

In order to properly assess the research potential of the study area, a group of secondary goals were established for this project. These goals were also listed in Chapter One; however for the sake of the reader, they will be restated and discussed further in terms of a formal research design. The secondary goals included:

A. An assessment of land-use patterns over time within the core of a political center.

B. The collection of data sufficient to make inferences regarding an affluent neighborhood in late 18th and 19th century Raleigh, North Carolina.

C. The collection of data sufficient to make inferences regarding the processes of urbanization and its effects on the study area over time.

THE RESEARCH DESIGN: The Research Questions

The resource management aspects of this project have been stated above. The research aspects will center around a set of questions. These questions consist of the following:

A. What are the land use patterns over time within the study area? Using the urban land use measures employed by Rubertone (1982) and Rothschild and Rockman (1982) the patterns for the study area will be measured and compared to a body of comparative data (Hargrove 1985a, 1985b). Inferences will be made regarding any patterns of land use noted for the various areas.

B. What artifact patterns are associated with an affluent neighborhood in 18th and 19th century Raleigh, North Carolina? Working under the assumption that this lot was inhabited by several wealthy families until approximately 1900 (Angley and Crow 1988), the artifact patterns will be assessed to denote the frequencies of specific artifact groups (South 1977). Socioeconomic inferences will be made using the work of Miller (1980) and Spencer-Wood (n.d.) as a guide. In addition, faunal remains will be assessed to make inferences regarding diet. What comparative data are available?

C. What inferences can be made regarding the process of urbanization? A discussion of the data collected will be made using the Locus Model (Smith 1976). This approach advocates the examination of the local community, an integration of components (separate communities), and inferred pan socio-cultural connections (Smith 1976:256). While it is obvious that the scope of this project is not broad enough to fully address this question, a body of data will be created to generate or cite testable models and formulate research questions for further work.

THE RESEARCH DESIGN: Sampling and Field Methods

The study area is located within a disturbed, urban setting. Its position in both time and space is one small component of a larger entity, the city of Raleigh, which is part of a larger universe of urbanized areas. The study area, therefore, samples a very small, incomplete portion of the universe.

It is acknowledged that sampling has a role in urban archeological research (Morris 1975; Staski 1982). According to Morris,

> "the large size of the urban sites puts extremely severe demands on limited archaeological resources, and the ideal of a complete study and excavation is essentially never a realistic alternative to some kind of sampling. The proportion of the total site which can be excavated in fact is very small. A second characteristic of urban sites is that their internal structure is extremely complicated; the archaeologist is faced with the description and reconstruction of a large number of overlapping activity patterns. This means that internal variability makes it extremely difficult to approach a 'representative' sample of an urban site which can even come close to portraying its vast internal complexity" (1975:192).

In some urban studies cities have been considered as sites (Morris 1975; Cressey et al. 1982). The treatment of cities as sites requires a phased research strategy to provide structure to particular investigations

(Cressey et al. 1982). The nature of this project, however, will not allow a phased sampling methodology. The data collected from the study area will serve as a small sample of comparative data for work previously done in the general area (Hargrove 1985a, 1985b) to research a specific set of questions.

The utility of small samples from historic sites has been discussed by Salwen et al. (1981). They concluded that this type of information is useful to others as a body of comparative data in the development and testing of hypotheses regarding sets of research problems in historic archeology (Salwen et al. 1981:79). The use of small samples is not, however, without its detractors (Redman 1974; Asch 1975:190). The problems associated with small samples from highly disturbed sites are acknowledged and accepted as a limitation of the research design for this report.

Morris offers a set of guidelines for translating research goals into applicable research strategies. One of the guidelines includes the maximization of "previous records and surface data to make excavations as productive as possible" (1975:196). This guideline is particularly useful for historic archeology in general and particularly for urban studies. Morris is quick to point out that the use of this information enters the element of nonprobability into the sampling strategy, but admits that this is inevitable when sampling urban sites (1975:196).

Nonprobabilistic sampling has applicability to archeological research (Asch 1975). According to Asch, "Some reasons for employing a nonprobabilistic phase are:

1. to investigate spatial structure;

2. to select more representative, if biased, samples when only a few sampling units can be excavated;

3. to investigate sites in which preservation of contexts varies widely;

4. to establish feedback between field data and the design employed in collecting them;

5. to increase the collecting efficiency for rare items" (1975:191).

Like many historic sites a great deal of documentation already exists for the study area (Angley and Crow 1988). Included with the above are an array of Sanborn Insurance Maps, tax and plat maps, newspaper accounts, and general area historical publications. For this reason and those cited by Asch (1975) the sampling design used for this project is close to what Redman calls "judgement sampling" (1974:55-5). Based on prior knowledge of the spatial arrangement of the structures dating from 1797 to 1847 a set of five sample units (trenches) was placed within the study area to approximate the locations of these structures (Figure 5-1). This sampling design was implemented in order to 1) maximize the probability of encountering intact features relating to the early years of Raleigh's history; 2) make the most efficient use of limited time and money.

FIELD METHODS

The fieldwork was divided into two phases, set-up and sampling. The set-up phase consisted of 1) background research of the existing literature on the study area, and 2) the placement of a baseline grid system to establish horizontal control over the site. The baseline was set at the southwest corner of the study area. A permanent benchmark, #363, Raleigh, West Quadrangle (USGS), was used as a datum. This point is located on the NE cornerstone of the State Capitol, UTM Northing 3961960m, Easting 713365m at 362.421' AMSL. The southwest corner of the baseline consists of a wooden stake (N100/E100) located N40E at 260' from the datum using magnetic north. The baseline was extended northward 440' and eastward 210' in 10' increments. The baseline runs along the sidewalks that frame the south and west sides of the study area. The placement of the earlier structures was available from existing maps and measured in the field. The approximate boundaries were either staked or spray painted in the field to guide the placement of the sample units (trenches).

The sampling phase consisted of the mechanically assisted excavation of five units (trenches). All units were oriented slightly east of north and constisted of the following:

A. Trench 1 -- An irregularly shaped unit located within grids N110 to N140 and E100 to E130. The unit measured 30.4 ft on an approximate north to south axis with a 10.4 X 2.3 ft extension to the south and 9.7 ft on an approximate east to west axis with a 13.6 X 3.9 ft extension to the west. The unit encompassed 416.13 ft^2.

B. Trench 2 -- An irregularly shaped unit located within grids N100 to N130 and E200 to E240. The unit measured 13.7 ft on an approximate north to south axis with a 3.3 X 5.8 ft extension to the south and 14.5 ft on an approximate east to west axis with a 8.1 X 3.0 ft extension to the east and a 7.5 X 3.2 ft extension to the west. A additional extension of this unit was located adjacent to the southeast corner of the unit. This extension measured 9.1 ft on an approximate north to south axis and 2.5 ft on an approximate east to west axis. The unit encompassed 340.16 ft^2.

C. Trench 3 -- An irregularly shaped unit located within grids N150 to N180 and E190 to E200. The unit measured 30 ft on an approximate north to south axis and between 5.5 to 9.0 ft on an approximate east to west axis. The unit encompassed 255.10 ft^2.

D. Trench 4 -- A rectangular unit located within grids N230 to N270 and E190. The unit measured 38.6 ft on an approximate north to south axis and 2.3 ft on an approximate east to west axis. The unit encompassed 88.78 ft^2.

E. Trench 5 -- A rectangular unit located within grids N240 and E210 to 230. The unit measured 6.0 ft on an approximate north to south axis and 12 ft on an approximate east to west axis. The unit encompassed 72 ft^2.

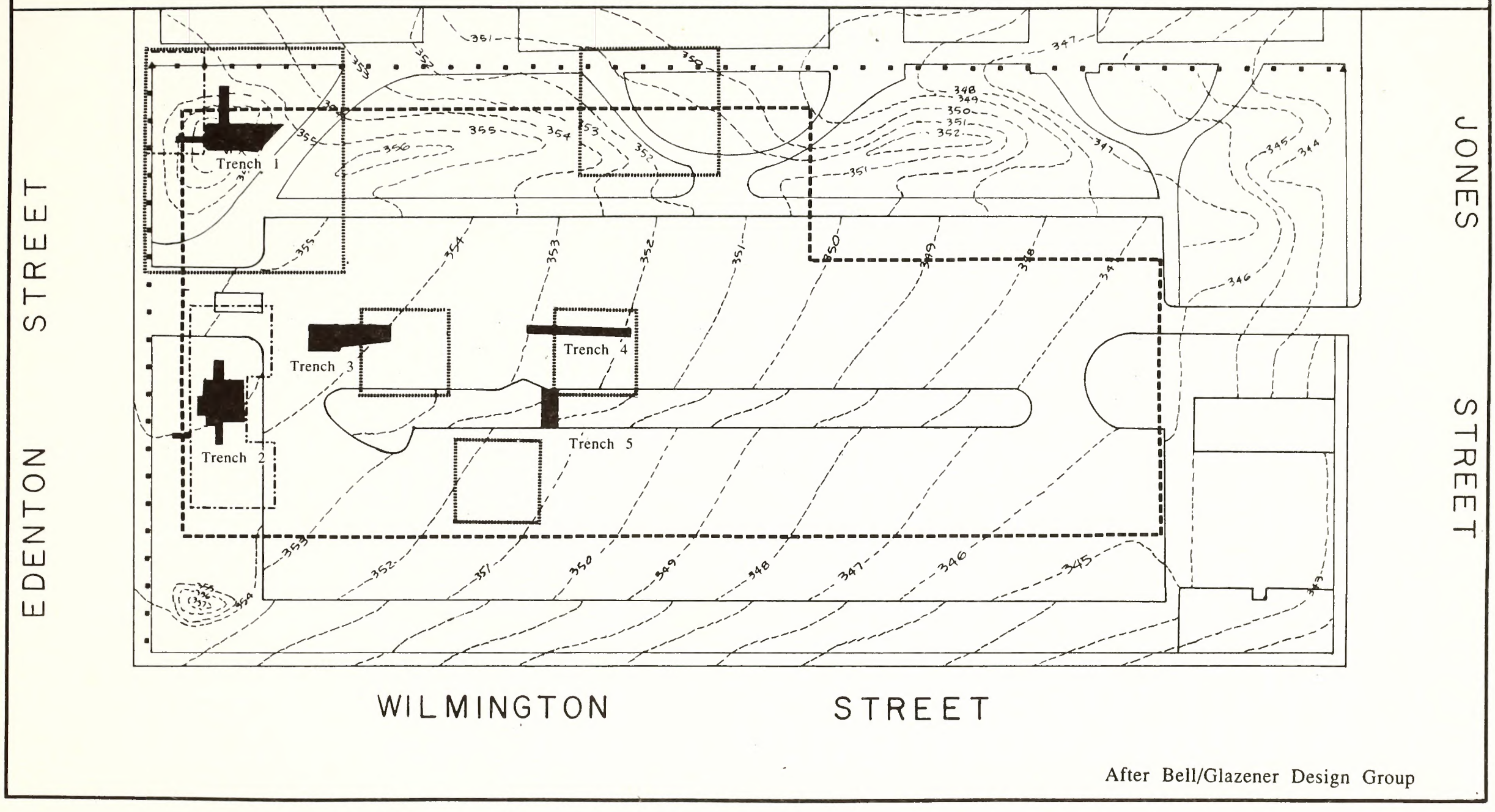
N.C. Museum of History Project

The Study Area, 31WA656

0 40 80

Feet

Proposed Building 1797 Structures 1845 Structures



After Bell/Glazener Design Group

Figure 5-1: 31Wa656**: The Study Area

The five units together encompassed 1172.17 ft^2. This square footage equals 1.35% of the total study area (87,120 ft^2).

The sample units were mechanically excavated to either distinct soil changes or evidence of intact structural features. Hand excavation was carried out beyond the point where the use of a backhoe was considered inappropriate. The fill from the backhoe was visually inspected for artifacts within each unit. As the excavation of each unit progressed, logical blocks of material from both overburden and feature contexts were assigned separate Field Specimen (FS) numbers to identify the provenience of each block of excavated material within a particular sample unit. The exact size of each FS varied in depth and areal extent according to the manner in which it was excavated. Mechanical excavation, for example, often dictated the assignment of a rather large area to a particular FS (ie. 1-2ft thick by 100+ square feet). Hand excavation of archaeological features often required the removal of materials in smaller and more exact quantities in either 3" arbitary levels or as dictated by naturally and culturally derived stratigraphy. The fill from positively identified features was passed through 1/4" mesh for artifacts. A measured portion (10 gallons) of the fill from each field specimen within positively identified features was collected for flotation. Each unit and the field specimens within were documented with photographs, scale drawings of floor plans, and stratigraphic profiles. All units were tied into the grid system established for the entire site with depth measurements and locational data tied to the formal datum. All artifacts were taken to the Office of State Archaeology, Raleigh, for processing. Analysis was completed at the Archeology Laboratories, Wake Forest University, Winston-Salem. Permanent curation will be with the Division of Archives and History, Raleigh.

ANALYTICAL METHODS

The materials collected were catalogued and analyzed using a variety of techniques and references. A few nondiagnostic prehistoric artifacts were recovered. These artifacts were classified using Bradley (1973). The disturbed context of these artifacts did not allow any interpretation concerning prehistoric activities within the study area.

Historic artifacts were classified, with slight modifications, according to South's (1977) functional artifact groups. The frequencies and percentages of these functional groups were interpreted according to certain patterns defined and discussed at length by South (1977). This scheme, with the added modifications, is discussed in detail in Chapter 7 of this report.

Historic ceramics were classified using various glossaries and a comparative collection on file at the Office of State Archaeology. The ceramics were interpreted using Miller (1980). Nails were classified using Fontana (1965). Temporal interpretations using nails and flat glass follows the example of Orser, et al. (1987). Glass was classified according to Jones and Sullivan (1985). Temporal interpretations for glass were made using the works of Newman (1970), Jones (1981), Jones and Sullivan (1985), and Fike (1987).

The classification of faunal remains was carried out using a combination of comparative materials and a series of reference materials (Olsen 1960, 1964, 1968, and 1972).

CHAPTER SIX: RESULTS OF INVESTIGATIONS

The purpose of this chapter is to present the data obtained from the five test trenches excavated during this project. Each trench will be discussed in terms of its excavation, stratigraphy and any cultural or architectural features encountered. Additionally, artifacts recovered are listed with each unit and categorized according to the conventions outlined in the methods section of this report (Chapter 5). One final note is that all elevations and depths in the following discussions are listed as Feet Below Datum (FBD) where the datum is benchmark 363 located on the NE cornerstone of the State Capitol at 362.42ft (AMSL).

TRENCH 1

Trench 1 lies in the southwestern corner of the study area adjacent to the former intersection of old Halifax and Wilmington Streets. The main 10 x 30ft section of the unit is roughly bordered on the east and west by the E130 and E140 gridlines and to the north and south by the N120 and N150 gridlines (Figure 6-1). The unit is located in the center of an elevated berm planted with ornamental shrubs and trees, and surrounded by the walkways associated with the Bicentennial Mall. Excavation of the unit began with the use of a backhoe to remove urban fill associated with the landscaping of the the area and the demolition of the Vass house. Hand excavations were used in the final stages for artifact recovery, and to evaluate and define any features. A total of three FS units were arbitrarily designated by excavation sequence.

1. Field Specimen 1 -- This FS consists of the urban fill removed from the inital 10 x 30ft section of the trench and its two extensions to the South and West. Fill was removed from the top of the berm at 2.41 FBD to a uneven surface at 6 FBD. Three major strata were identified within the east wall profile of this level (Figure 6-2). The first stratum consisted of yellowish brown (10YR 5/6; Fig. 6-2:A) clay loam mottled with reddish orange clay and brick fragments and was confined to the southern end of the unit. Lying partially underneath was a stratum of red (2.5YR 4/8; Fig. 6-2:B) clay mottled with occasional brick fragments. This stratum continued north to the base of the berm were it intersected a dark brown (10YR 4/3; Fig. 6-2:E) clay loam mottled with orange clay, brick fragments, plaster, mortar, and gravel which continued north to the unit's intersection with the sidewalk along the east wall. The floor of FS1 was divided into two distinct zones. In the southern section, the floor consisted of a thin layer of brownish yellow (10YR 6/6; Fig. 6-2:C) sandy clay overlying yellowish brown (10YR 5/6; Fig. 6-2:D) sandy clay. In contrast the northern part of the unit consisted of a dark brown (10YR 2/2; Fig. 6-2:F) loam fill mottled with yellow brown (10YR 5/6) clays, plaster, concrete, brick, wood and historic artifacts. These two zones met along a ragged border approximately 0.3ft north of the N130 gridline.

2. Field Specimen 2 -- This FS consists of the northern half of Trench 1 that contains the dark brown (10YR 2/2; Fig. 6-2:F) loam fill identified in the floor of FS1. Prior to excavation a small 50 x 75cm

exploratory testpit was excavated by hand to evaluate the fill for any intact architectural features. The test indicated the continued presence of mixed urban fill to a depth of 7.1 FBD. The remainder of FS2, a rectangular unit 9 x 11ft, was then excavated by backhoe until a different fill layer was encountered. The floor of the unit was then leveled at 7.63 FBD by hand excavation and extend to the north along the western wall to meet the curve of the adjacent sidewalk. At this depth, the floor contracted to the north from its former dimensions of 9 x 11ft along the eastern wall to an area of 9 x 7.5ft where it made a sharp virtical drop exposing yellow-red (5YR 5/8; Fig. 6-2:H) clay subsoil. The floor of this area contained brown (7.5YR 5/8; Fig. 6-2:G) loam fill mottled with yellow-orange clays, plaster, wood, brick, and historic artifacts. Additionally, two large slabs of concrete (Fig. 6-2:G)deposited with the fill were uncovered during the excavation of the FS2 in each of the northern corners of the unit.

3. Field Specimen 3 -- This FS is situated in the western half of the floor of FS2. A 9.5 x 4.5ft area along the western wall was excavated 0.59' to a depth of 8.22 FBD. The excavation of FS3 uncovered the remains of a brick foundation wall in the southern section of the unit (Figures 6-1; 6-3). Immediately to the north of the wall was a thin layer of yellow brown sand covering a yellowish red (5YR 5/8; Fig. 6-3:E) clay subsoil floor. The sand floor extended north 2.7ft while the remainder of the floor was yellowish red clay. Also present in the northern half of the floor FS3 were five deep parallel grooves. These grooves appear to be the teeth marks of the excavator used in the demolition of the Vass house.

A total of 491 artifacts were recovered from the FS's of Trench 1 discussed above. These artifacts are listed according to category in Table 6-1 .

Evidence for preserved historic features is minimal within Trench 1. The only intact features present are the foundation wall and sand floor section uncovered at the bottom of FS3. The foundation wall appears to be a remnant of the Vass house that was constructed in this corner of Lot 210 around 1881. However, both the extreme degree to which the Vass house was destroyed and the depth to which the structure was constructed leave little possiblility for the preservation of any earlier structures or cultural features in the area.

Table 6-1: Artifacts Collected, Trench 1

Artifact Group	FS1	FS2	FS3
Kitchen			
Ceramics	32	32	28
Glassware	9	31	42
Kitchenware	1	0	0
Food			
Bone	0	0	4
Shell	2	2	4
Architecture			
Nails	11	22	56
Window Glass	14	19	112
Brick	0	14	1
Plaster	2	8	1
Concrete and Mortar	0	1	1
Slate	0	1	1
Tile and Pipe	1	0	0
Arms			
Shell Casings	1	0	0
Clothing			
Cloth Fragments	1	0	0
Buttons	0	0	1
Personal			
Jewelry	1	0	0
Medicine Bottles	1	1	1
Tobacco Pipe			
Pipe Fragments	0	0	1
Activities			
Misc. Hardware	1	0	12
Other	0	4	13
Prehistoric			
Debitage	1	0	0
Total	67	113	223

Total Artifacts = 491

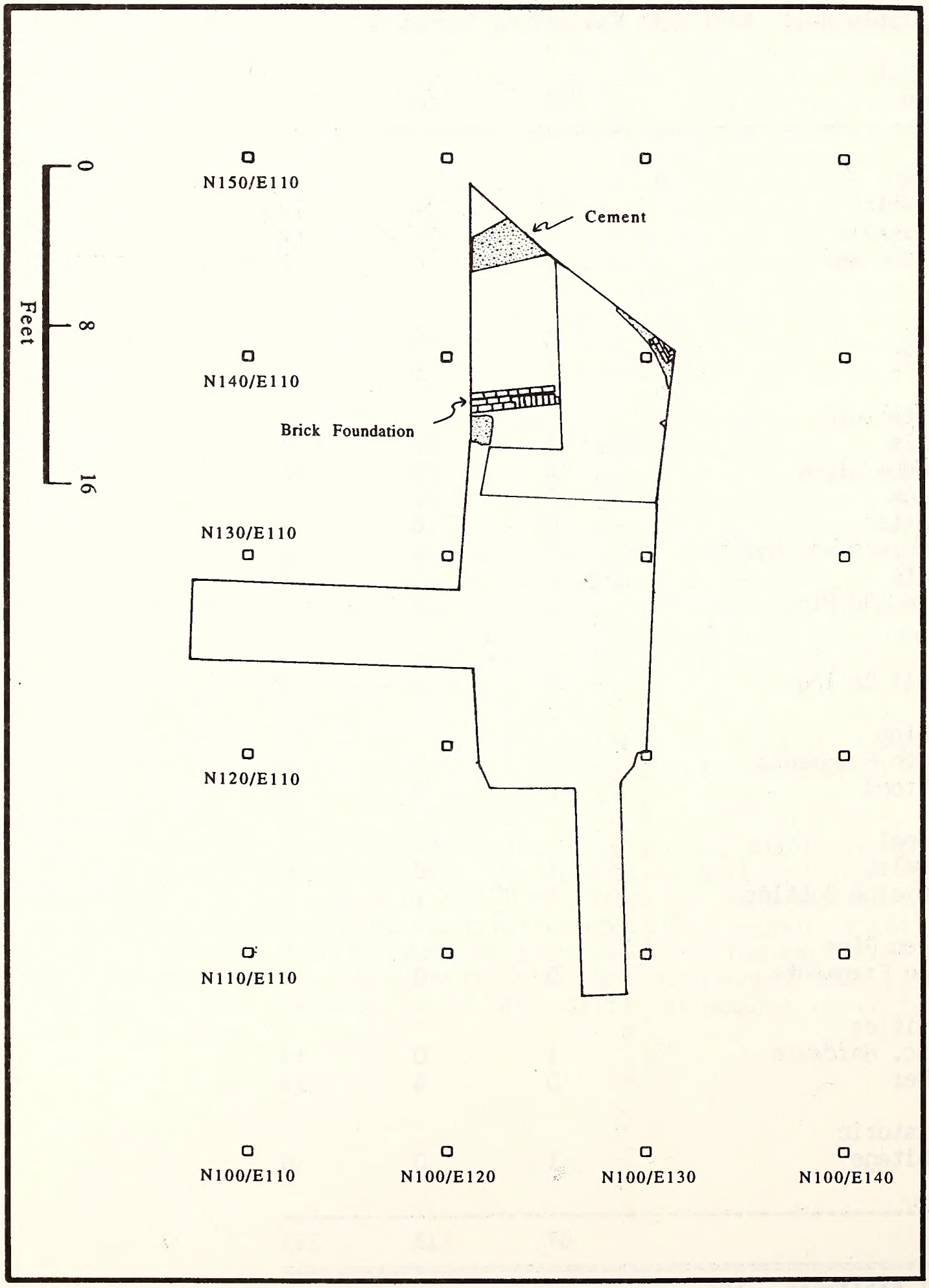
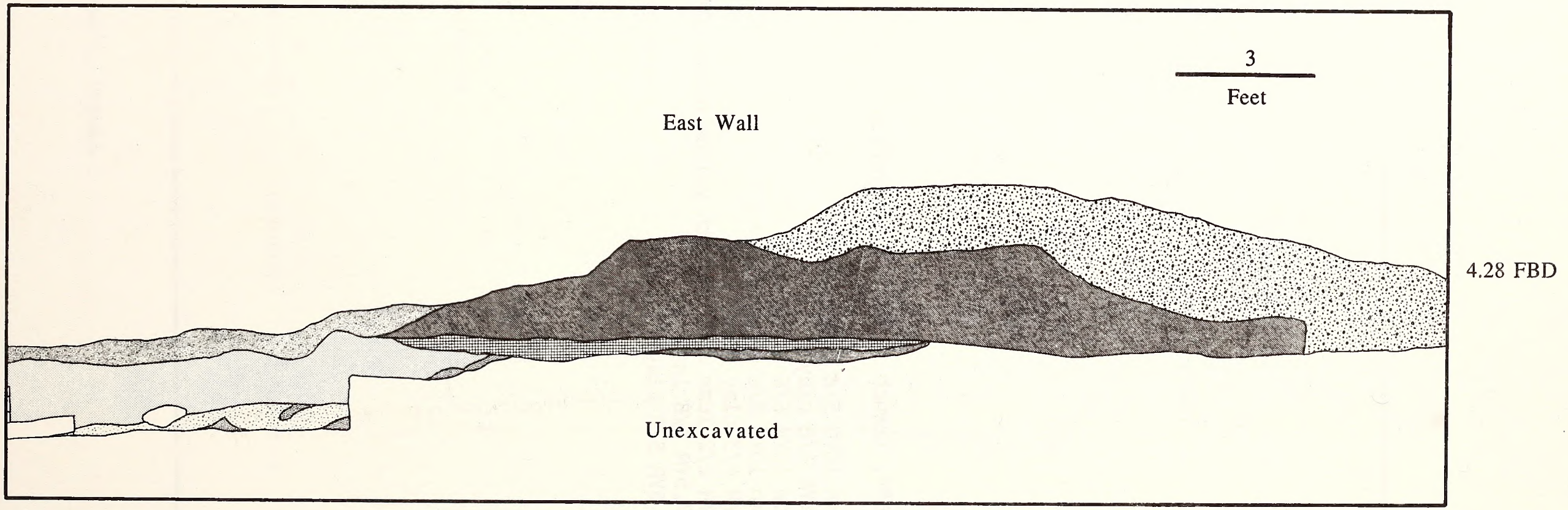


Figure 6-1: 31Wa656**, Trench 1

Figure 6-2: 31Wa656**, Trench 1, East Wall Profile

A - Yellowish brown 10YR 5/6 clay loam
B - Red-orange 2.5YR 4/8 clay
C - Brownish yellow 10YR 6/6 sandy clay
D - Yellowish brown 10YR 5/6 sandy clay
E - Dark brown 10YR 4/3 clay loam
F - Dark brown 10YR 2/2 loam mottled with yellow brown 10YR 5/6 clay
G - Strong brown 7.5YR 5/8 loam
H - Yellowish red 5YR 5/8 clay



A B C D E F G H

Figure 6-3: 31Wa656**, Trench 1, West Wall Profile

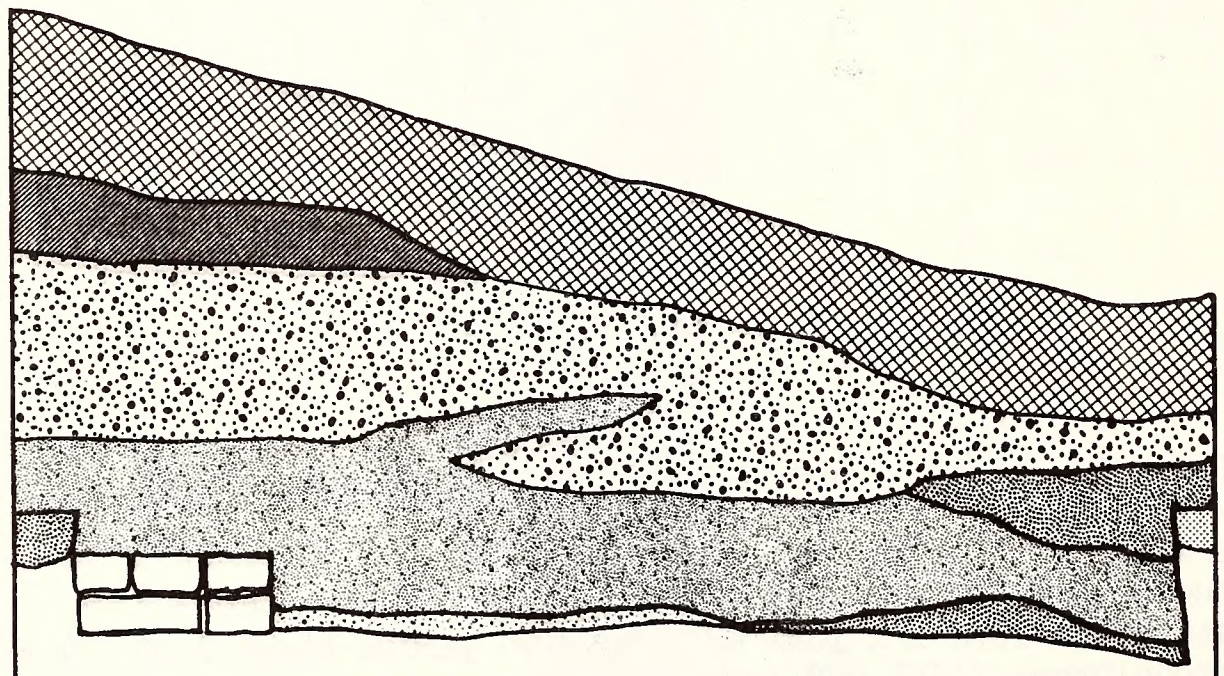
A - Brown 10YR 4/3 clay loam
B - Brownish yellow 10YR 6/6 sandy clay
C - Dark brown 10YR 2/2 loam mottled with yellow brown 10YR 5/6 clay
D - Strong brown 7.5YR 5/8 loam
E - Yellowish red 5YR 5/8 clay
F - Yellowish brown 10YR 6/4 coarse sand
G - Concrete

2

Feet

West Wall

4.41 FBD



Unexcavated

A

B

C

D

E

F

G

TRENCH 2

This test unit is located in a grassed area on the south side of the project area adjacent to Edenton Street. The unit is circumscribed by the N100-N130 and E200-E240 gridlines (Figure 6-4). The main section of Trench 2 was a 10 x 12ft block initially excavated with a backhoe and later expanded to an approximate area of 14 x 15ft with linear additions on the east, west and south sides. In total of twelve FS units were assigned to this unit.

1. Field Specimen 1 -- This FS is comprised of the main 14 x 15ft block and its four additions. Fill was removed from the ground surface at 5.75 FBD to a depth of 8.98 FBD. The fill present (Figure 6-5) included mixed strata of reddish brown (5YR 4/3; Fig. 6-5:A) sandy loam mottled with brownish yellow (10YR 6/6) sandy, dark brown (10YR 4/3; Fig. 6-5:B) loam, and light red (2.5YR 6/8; Fig. 6-5:C) clays mottled with reddish yellow (5YR 7/8) clays. Urban complex debris of brick, rusting sheet metal, tile and mortar was mixed with these soils. Features uncovered by the excavation of this FS included a flagstone walkway located in the NE quadrant, and a concrete basement floor and two stone and mortar support pillars within the southern half of the unit. Surrounding the basement were foundation walls of brick and stone with associated a builder's trench. An anomolous fractured depression in the basement floor was identified along the south wall of the basement.

2. Field Specimen 2 -- This FS consists of the first 3.5ft of fill removed from the fractured depression identified in the concrete (Fig. 6-5:E) floor of FS1. Fill comprised of a mixture of red micaceous clay (Fig. 6-5:F) with brick, plaster and concrete rubble was removed from between 8.98-12.48 FBD. These excavations revealed a shaft roughly 3.5ft square with plastered clay walls. The floor of the FS was a dark mottled sand that formed a fan shaped slope from NE to SW corners of the shaft.

3. Field Specimen 3 -- This FS represents a .23ft layer of yellow brown (10YR 5/8; Fig. 6-5:D) mottled sand excavated as a natural stratum in the NE corner of the shaft between 12.48-12.62 FBD.

4. Field Specimen 4 -- This FS consists of a natural stratum of brown sandy loam excavated from beneath FS3 in the NW corner of the shaft between 12.62-12.92 FBD.

5. Field Specimen 5 -- This is a natural layer of yellow sand mottled with red sandy clay excavated from the SW corner of the shaft between 12.62-12.92 FBD.

6. Field Specimen 6 -- This FS consists of a single arbitrary stratum covering the entire shaft floor between 12.92-13.22 FBD. The fill removed from this level was a mixture of yellow (2.5Y 2/4) sand mottled with yellow brown (10YR 5/4) loamy sandy clay and decaying wood.

7. Field Specimen 7 -- This is an arbitrary stratum of red (10R 5/8; Fig. 6-5:H) silty clay mottled with yellowish brown (10YR 5/4) loamy sandy clay excavated from 13.22-13.52 FBD.

8. Field Specimen 8 -- This FS consists of fill materials from 13.52-14.0 FBD. This includes a .18ft layer of materials lost to water damage of the shaft and a .3ft arbitrary stratum of yellow brown (10YR 5/4; Fig. 6-5:I) clay mottled with yellow (2.5Y 7/4; Fig. 6-5:J) sand and red (10R 5/8) silty clay.

9. Field Specimen 9 -- This FS consists of an arbitrary stratum of red (10R 5/8) clay mottled with yellow (2.5Y 7/4) sand between 14.0-14.3 FBD.

10. Field Specimen 10 -- This is an arbitrary stratum between 14.3-14.6 FBD of the same fill materials as described in FS9.

11. Field Specimen 11 -- This FS is the final fill strata from the shaft feature between 14.6-14.9 FBD. The fill removed from this level consisted of red (10R 5/8) silty clay.

12. Field Specimen 12 -- This FS consists of materials recovered from underneath one of the flagstones in the northeastern quadrant of FS1. The stone was removed to investigate any earlier depositional stages in that area but revealed only sterile red micaceous clay. The few artifacts underneath the stone appeared to have been incidentally deposited during the construction and use of the walk.

A total of 3834 artifacts was recovered from the twelve FS's excavated in Trench 2. These data are listed in Table 6-2 according to artifact groups and categores defined in Chapter 5.

Trench 2 revealed considerable evidence for the preservation of architectural and cultural features. The basement and foundations located in FS 1 are well preserved and appear to have been constructed or modified in such a manner as to have preserved any earlier features that might be present. The primary example of this is indicated by feature excavated in FS's 2-11 which appears to represent a small cellar or dairy for one the 19th century structures known to have been constructed at the site.

Enclosed cellars and a dairy were recorded at the King's Reach Plantation in Maryland (Pogue 1988). The dairy consisted of a small shed attached to the hall gable with a shallow, wood-lined pit measuring approximately 1.75m square. Entry into the dairy would have been possible from the top through either the hall or a small dorway on the exterior of the shed. The dairy would have been used mainly to store milk and other dairy products, but may have also served as a general storage area (Pogue 1988:42).

A dairy feature was recorded at the St. John's site, also in Maryland (King 1988). As with the remains at the King's Reach Plantation, this dairy was associated with the hall and had a subterranean cobble floor. The dairy was attached to the back of the structure. Associated artifacts included milk jar fragments and bowls.

The feature located within Trench 2 was plaster-lined and apparently had wooden shelves along the sides. This supports the assumption that this feature is a dairy. Milk products and foods could have been stored on the shelves allowing access from the top by a ladder. The general lack of artifacts associated with dairies, milk pans and bowls, suggests that the feature had apparently not been utilized as such for a time before being filled and covered.

Table 6-2: Artifacts Collected, Trench 2

Artifact Group	FS1	FS2	FS3	FS4	FS5	FS6	FS7	FS8	FS9	FS10	FS11	FS12
Kitchen												
Ceramics	106	14	6	5	1	18	13	10	13	17	0	1
Glassware	119	43	21	86	16	184	100	25	71	36	1	3
Kitchenware	0	0	0	12	0	0	0	0	2	0	0	0
Food												
Bone	113	6	3	64	0	25	10	12	30	11	2	0
Shell	23	2	9	9	5	14	32	12	13	6	0	0
Architecture												
Nails	389	74	7	0	3	16	20	17	29	57	0	0
Window Glass	88	25	38	30	3	29	36	20	52	46	4	9
Brick	13	8	1	0	0	5	2	41	21	39	12	0
Plaster	4	5	0	1	0	0	0	0	0	30	3	0
Concrete and Mortar	25	4	0	0	0	0	6	4	0	0	0	0
Slate	5	0	0	0	0	0	0	0	0	0	0	0
Tile and Pipe	44	4	0	1	0	0	1	0	0	0	0	0
Misc. Architectural	172	35	20	21	3	44	2	9	75	28	0	3
Furniture												
Hardware	0	0	1	0	0	0	1	1	4	0	0	0
Arms												
Shell Casings	1	0	0	0	0	0	0	0	0	0	0	0
Bullets and Shot	0	0	0	1	0	0	0	1	0	1	0	0
Clothing												
Cloth Fragments	0	0	0	0	0	0	0	0	0	0	0	0
Buttons	4	2	0	0	0	0	0	0	1	0	0	0
Hardware	0	0	0	1	0	1	0	0	0	0	0	0

Table 6-2: Artifacts Collected, Trench 2 (cont.)

Artifact Group	FS1	FS2	FS3	FS4	FS5	FS6	FS7	FS8	FS9	FS10	FS11	FS12
Personal												
Jewelry	0	0	0	0	0	0	0	0	0	0	0	0
Bottles	5	0	0	0	0	1	1	1	2	8	0	0
Miscellaneous	1	0	0	0	0	3	1	0	1	0	0	0
Activities												
Misc. Hardware	598	39	7	14	1	5	39	18	41	36	3	0
Ethnobotanical	5	3	0	0	0	0	0	0	0	0	0	0
Other	15	2	0	0	0	0	2	4	2	2	0	0
Prehistoric												
Debitage	3	1	0	0	0	0	0	0	0	1	0	0
Total	1733	267	113	245	32	341	266	175	345	276	25	16

Total Artifacts = 3834

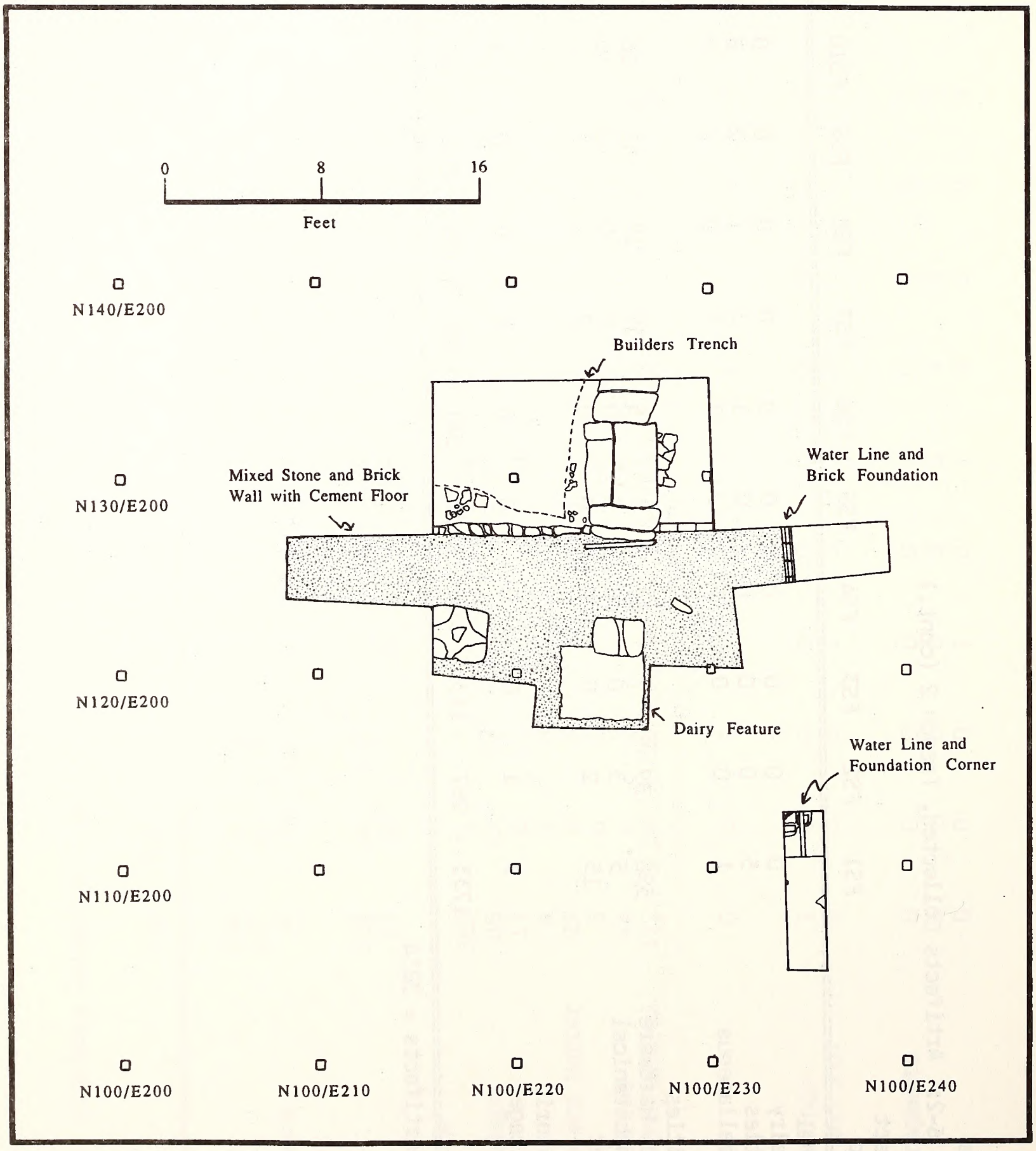
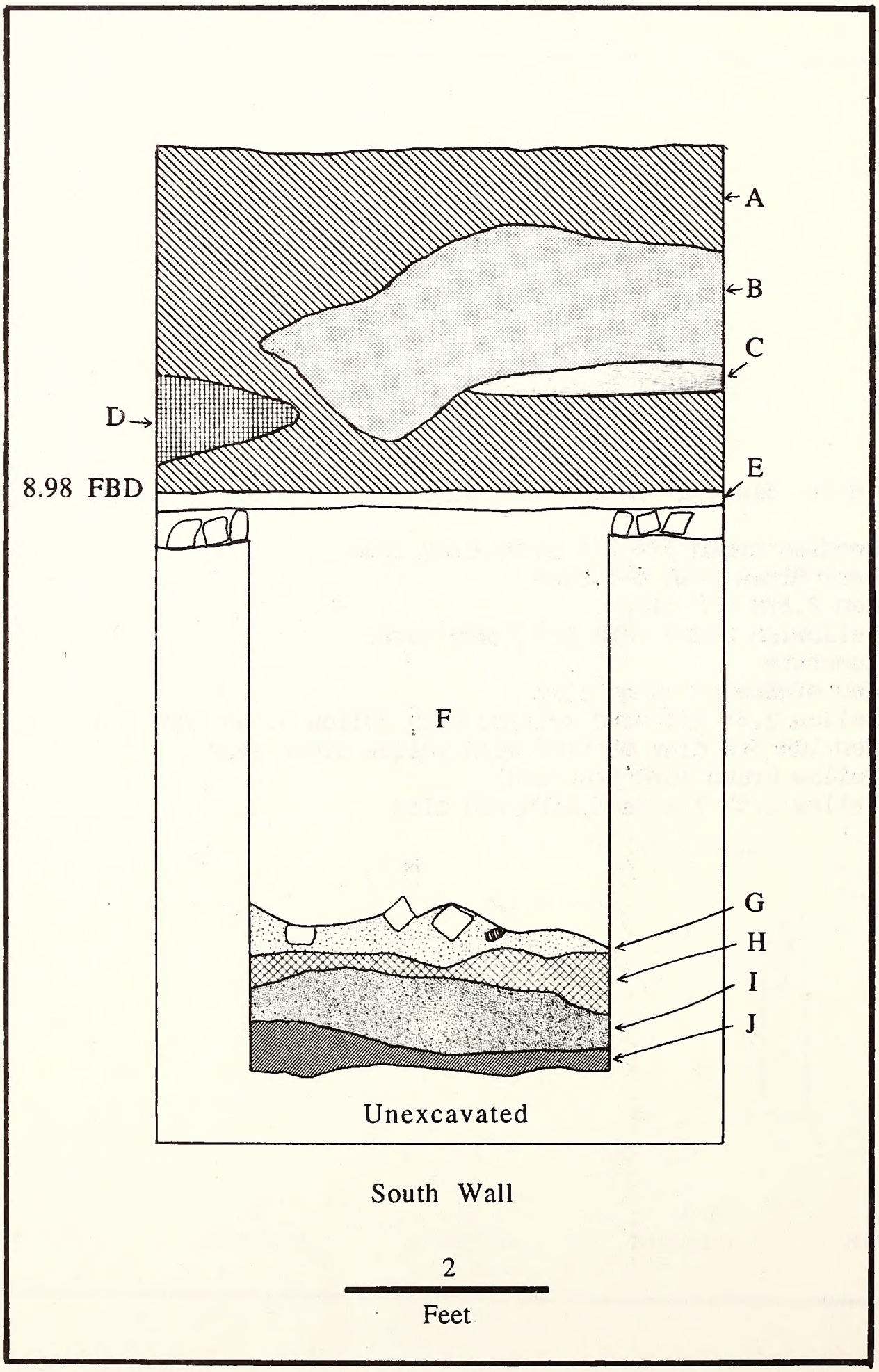


Figure 6-4: 31Wa656**, Trench 2, Planview

Figure 6-5: 31Wa656**, Trench 2, South Wall and Dairy Feature

A - Reddish brown 5YR 4/3 sandy clay loam
B - Dark Brown 10YR 4/3 loam
C - Red 2.5YR 6/8 clay
D - Yellowish brown 10YR 5/8 loamy sand
E - Concrete
F - Red micaceous sandy clay
G - Yellow 2.5Y 7/4 sand mottled with yellow brown 10YR 5/4 loamy sand
H - Red 10R 5/8 clay Mottled with yellow brown sand
I - Yellow brown 10YR 5/4 sand
J - Yellow 2.5Y 7/4 sand with red clay


A
B
C
D
E
8.98 FBD
F
G
H
I
J
Unexcavated
South Wall
2
Feet

TRENCH 3

This unit was situated in the south central section the project area between the N150-N180 and E190-E200 gridlines (Figure 6-6). The unit was approximately 30' long and varied between 5-9ft in width. A single FS was arbitrarily designated for the fill excavated from this unit.

1. Field Specimen 1 -- This FS consists of the urban fill removed from the trench following the natural thickness of cultural strata. The depth of the unit varies between 7.38-9.95 FBD in the SW corner to 7.79-8.39 FBD in the NW corner. The stratigraphy as drawn from the south wall profile (Figure 6-6) below the asphalt shows a .35ft layer of coarse yellowish brown sand and gravel (Fig. 6-6:B) overlying .2ft of highly compressed urban fill containing dark yellowish brown (10YR 3/4; Fig. 6-6:C) sandy loam mottled with pale brown (10YR 7/4) sandy clay and red (2.5YR 4/8) clay. These destinct strata are overlying a relatively thick (1.7ft) layer of mixed urban fill containing loam, clay, sand, coal, brick, concrete and decaying wood (Fig. 6-6:D). Directly underneath this stratum is an undisturbed subsoil of strong brown (7.5YR 5/8; Fig. 6-6:E) clay mottled with red (2.5YR 5/8) clay and white flecks of decaying rock. Moving northward these cultural strata become increasingly compressed until the profile including all four strata has been reduced from 2.57ft to .6ft in thickness. The floor of FS 1 consists of a uniform and undisturbed subsoil of mottled brown and red clays. The only cultural features present were a large concrete block probably deposited as fill, the remains of a terra cotta drain and a water line, and a single compressed and distorted line of brick shown in the west wall profile .

A total of 95 artifacts were recovered from the single FS of Trench 3. These data are listed according to artifact categories in Table 6-3.

No definite architectural features were identified in Trench 3. The fill and profiles from the unit indicated an area of mixed urban fill subjected to severe compression of most cultural deposits. As a result any contexts that may have been present within the area have been severely distorted.

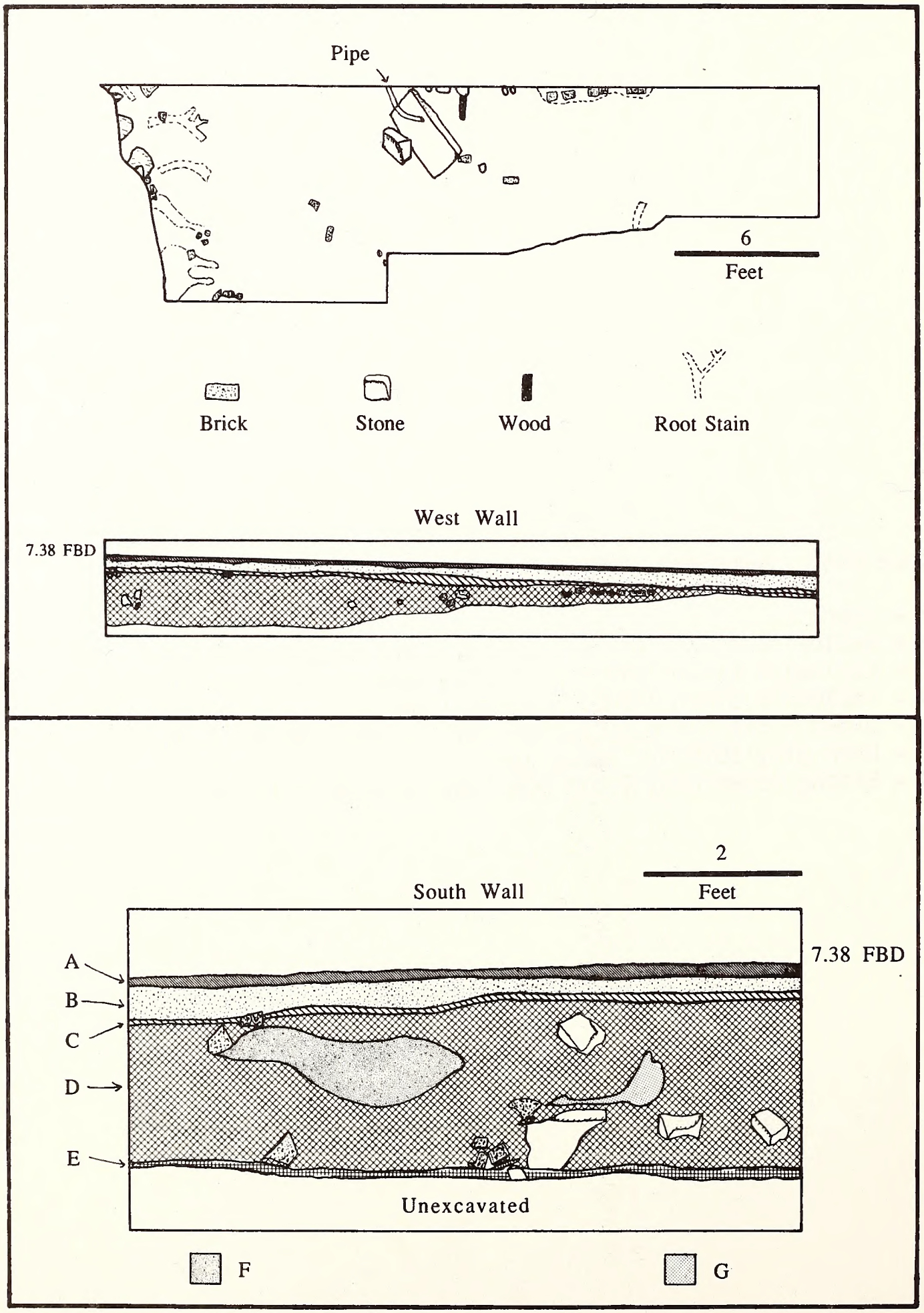
Table 6-3: Artifacts Collected, Trench 3

Artifact Group	FS1
Kitchen	
Ceramics	9
Glassware	28
Architecture	
Nails	21
Window Glass	16
Brick	0
Plaster	1
Concrete and Mortar	0
Slate	5
Tile and Pipe	11
Activities	
Misc. Hardware	2
Other	1
Prehistoric	
Debitage	1

Total Artifacts = 95

Figure 6-6: 31Wa656**, Trench 3, Planview and Profiles

A - Asphalt
B - Yellowish brown 10Yr 6/4 gritty sand and crushed rock
C - Yellowish brown 10YR 3/4, highly compressed sandy loam
D - Yellowish brown 10YR 3/4 sandy loam
E - Brown 7.5YR 5/8 clay mottled with 2.5YR 5/8 red clay
F - Dark gray 10YR 3/1 sandy loam
G - Strong brown clay 7.5YR 5/8 mottled with red clay


Pipe
6
Feet
Brick
Stone
Wood
Root Stain
West Wall
7.38 FBD
2
South Wall
Feet
A
B
C
D
E
7.38 FBD
Unexcavated
F
G

TRENCH 4

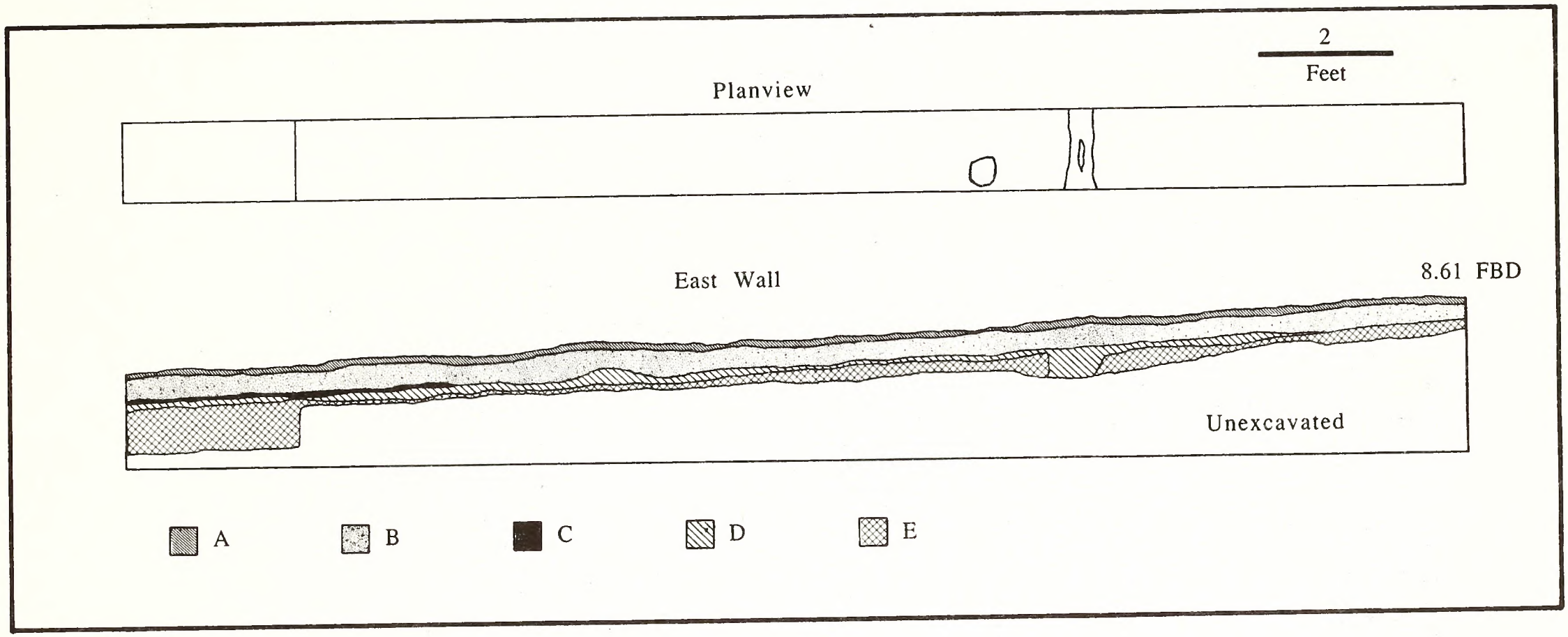
This unit lies within the central portion of the project area approximately 50ft north of Trench 3. The unit encompasses an area 38.6ft long by 2.3ft wide that was excavated as a single FS.

1. Field Specimen 1 -- This FS consists of a mixture of gravel, urban fill and undisturbed subsoil excavated at a relatively uniform depth between 8.58-9.55 FBD in the SW corner. A section in the northern end of the unit was more deeply excavated to 12.07 FBD to determine if the yellow-red clay was a secondary deposit associated with the construction of the parking lot. The east wall profile (Figure 6-7) revealed a layer of yellowish brown (10YR 6/4; Fig. 6-7:B) sand and gravel .7ft thick underneath the asphalt covering a .1ft layer of red (2.5YR 4/6; Fig. 6-7:C) clay fill and a .2ft layer of dark yellowish brown (10YR 3/4; Fig. 6-7:D) sandy loam over red (2.5YR 5/8; Fig. 6-7:E) clay with white flecks of decaying rock. The overall profile of the unit appears to have undergone the same compression and distortion that was apparent in Trench 3. The only cultural features located within Trench 4 were a terra cotta drain and a small, anomalous stain in the northern half of the unit.

As a result of the low density of cultural materials within this unit no artifacts were collected from the single FS that was excavated.

No definite architectural or cultural features were identified in Trench 4. The profiles of the fill materials excavated unit indicate a continuation of the pattern of extreme compression and distortion of cultural strata that was noted in Trench 3.

Figure 6-7: 31Wa656**, Trench 4, Planview and Profiles
A - Asphalt
B - Yellowish brown 10YR 6/4 gritty sand and crushed rock
C - Dark red 2.5YR 4/6 clay
D - Dark yellowish brown 10YR 3/4 loam
E - Red 2.5YR 5/8 clay


2
Feet
Planview
East Wall
8.61 FBD
Unexcavated
A
B
C
D
E

TRENCH 5

Trench 5 was a small 6 x 12ft unit located 20ft east of the SE corner of Trench 4. This placed the unit within the grassed parking median between the E210-E230 and parallel to the N240 gridlines. Two arbitrary FS units were assigned to the unit based upon excavation sequence.

1. Field Specimen 1 -- This FS consists of a mixture of urban fills removed from the unit between the ground surface at 9.54 FBD and 11.05 FBD (Figure 6-8). The fills removed were a complex mixture of a compact greyish brown (10YR 5/2; Fig. 6-8:A) sandy loam mottled with coarse yellow (10YR 8/6) sand and red (2.5YR 4/6) clay subsoil mixed with a gravel, charcoal, ash, brick and artifact debris. The north profile indicated an area of disturbance overlapping layers of fill that had been cross-cut by at least three shallow ditches from north to south. The floor of FS1 was divided between a dark oval stain covering most of the southern half of the unit and undisturbed red clay subsoils with decaying rocks to the north.

2. Field Specimen 2 -- This FS consists of fills excavated from the dark oval feature in the southern half of the unit. Fill similiar to that discribed above was removed from 11.05-11.33 FBD. These excavations revealed several large root tracks radiating from the dark oval stain into the surrounding sterile clay subsoil, suggesting that the large oval stain resulted from the collapse and/or removal of a large tree from the area. No intact architectural or other cultural features were noted within the unit.

A total of 64 artifacts were recovered from the two excavated FS's of this unit. These data are presented according to various categories in Table 6-4.

No architectural or cultural features were identified within Trench 5. The fill and profiles of the unit indicated that the area had apparently been disturbed by both the removal of a large tree and the construction of several small drainage lines through the area.

Table 6-4: Artifacts Collected, Trench 5

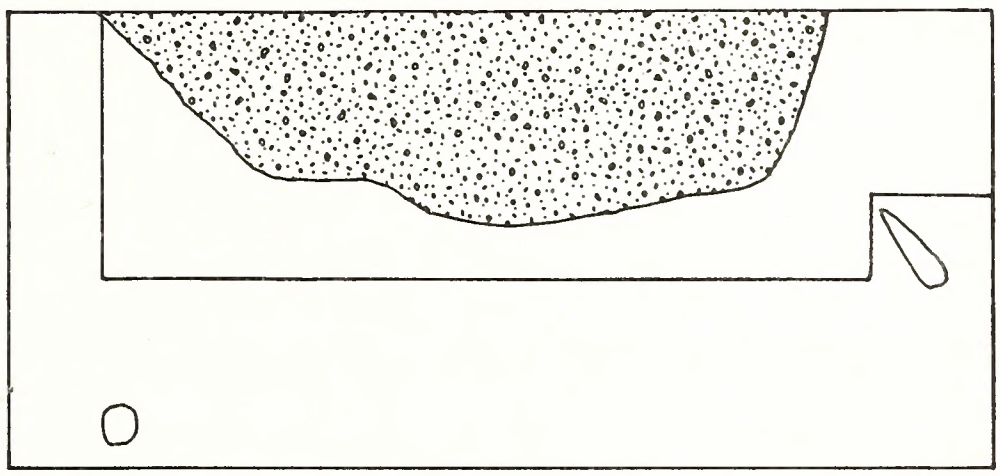
Artifact Group	FS1	FS2
Kitchen		
Ceramics	10	4
Glassware	4	13
Food		
Bone	6	0
Shell	0	2
Architecture		
Nails	0	1
Window Glass	2	2
Brick	0	1
Concrete and Mortar	1	3
Tile and Pipe	2	0
Misc. Architectural	0	7
Personal		
Jewelry	1	0
Medicine Bottles	1	0
Activities		
Misc. Hardware	1	0
Other	0	1
Prehistoric		
Debitage	0	1
Total	28	35

Total Artifacts = 63

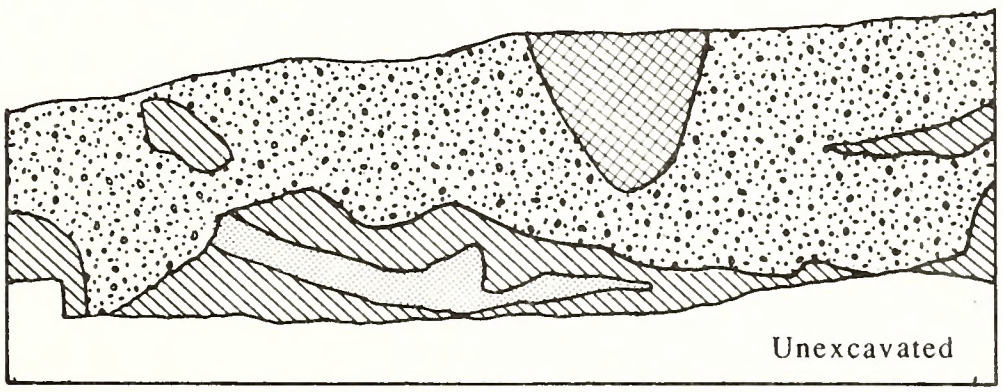
Figure 6-8: 31Wa656**, Trench 5, Planview and Profile

A - Compact grayish brown 10YR 5/2 sandy loam mottled with red 2.5YR 4/6 clay
B - Red 2.5YR 4/6 clay
C - Grayish brown 10YR 4/2 sandy loam mottled with red clay
D - Dark brown 10YR 4/3 loamy clay mottled with red clay

2
Feet



9.29 FBD



South Wall

A B C D

CHAPTER SEVEN: ANALYSIS OF THE DATA

The data analysis phase of this report will focus on an analysis of the dairy feature located in Trench 2 (primarily FS#'s 2-12); and an assessment of land usage within the study area. In the previous chapter it was shown that all units but Trench 2 revealed highly disturbed contexts. The well preserved structural remains in Trench 2 provide the only source of relatively useful archeological data to address the research questions posed for this study. Central to the primary and secondary goals set for this project are the answers to questions regarding when the dairy feature was filled and what information the contents of the feature may have concerning the diet and socioeconomic status of the inhabitants.

The land usage patterns determined for the study area will be compared to the patterns of two other blocks in the general vicinity (Hargrove 1985a and b). This information will be used to: 1) address the research questions posed for this project; 2) generate a body of comparative data for other researchers; 3) formulate a set of research questions for further work; and 4) approach a macrocosmic level of interpretation for the urbanization processes suggested by this study.

Some minor departures from South's (1977) classificatory scheme were used for the artifacts from this project. Medicine bottles were placed in the Personal Artifact Group because that group is more descriptive in terms of function than the Kitchen Group. A Food Group was established for the faunal remains. Last, a Miscellaneous Artifact Group was established for a variety of artifacts that were tabulated by weight rather by unit. The historic artifact groups are defined as follows:

1. Kitchen Group
   ceramics, bottle glass, tumblers, glassware (decanters, dishes, etc.), tableware (knives, forks, spoons, etc.), kitchenware (pots, pans, etc.).

2. Bone Group
   faunal remais (mainly food animals)

3. Architectural Group
   nails, window glass, bricks and mortar, plaster, construction hardware (hinges, staples, etc.), door lock parts (doorknobs, escutcheons, etc.).

4. Furniture Group
   furniture, furniture hardware (hinges, latches, handles, etc.).

5. Arms Group
   musket balls (shot), cartridges, slugs, gun parts.

6. Clothing Group
   buttons, grommets (shoe and clothing), hook and eye fasteners, beads (plastic and glass), buckles (shoe, pants, belt), thimbles, pins (straight and safety), scissors.

7. Personal Group
   coins, keys, combs, mirrors, watches, rings, medicine bottles, etc.

8. Tobacco Group
   pipes, tobacco cans, etc.

9. Activities Group
   toys, construction tools, farm tools, fishing equipment, miscellaneous hardware, etc.

10. Military Group
    buttons, swords, bayonets, shrapnel, etc.

11. Miscellaneous Group
    ethnobotanical remains (seeds, charcoal, coal, burned coal, wood fragments), miscellaneous rocks, unidentified melted glass.

What follows then is a series of sections dealing with the following topics:

1. a temporal analysis of the nails, ceramics and flat glass from the dairy feature in Trench 2;
2. a discussion of the artifact pattern suggested by the fill of the feature (South 1977);
3. a discussion of socioeconomic status suggested from the data analysis (Miller 1980; Spencer-Wood n.d.);
4. a discussion of the faunal material and suggestions regarding diet;
5. a discussion of the Miscellaneous Group and environmental considerations;
6. a discussion of land usage patterns.

TEMPORAL ANALYSIS

This section will focus on the temporal context of Trench 2 in an effort to establish a relative date range for the fill in the dairy feature. A key question concerns whether the feature was filled rapidly or over a long period of time. An answer to this question will help establish when the dairy feature in Trench 2 was covered with the cement floor and whether this floor is associated with the Badger House or a later structure. The techniques used are based on the nails, ceramics, and flat glass. It is fully realized that these techniques are not absolute and cannot be used individually with a great deal of confidence. Despite the obvious limitations, this provides the best and most expedient means by which to make inferences concerning the temporal nature of Trench 2.

Nails

Nail typology can be used as a relative dating tool (Orser et al. 1987). Nail typology and the general limitations and assumptions that are inherent in the analysis of nails from archeological sites have been discussed in detail by Orser et al. (1987:549-558) and will not be reiterated for this report. It is necessary, however, to repeat a set of general guidelines established by Orser et al. (1987) for establishing relative dates for structures. According to Orser et al.:

> "those structures that contain no wire nails should predate 1855 when wire nails were first produced, those structures that contain a wide majority of machine-cut nails over wire nails should pre-date the 1890s when wire nails started becoming more prevalent than cut nails, those structures that contain roughly equal proportions of both cut and wire nails might date to the 1880s-1890s when roughly comparable proportions of both types of nails were available, and those structures that contain a greater proportion of wire nails over cut nails should post-date the 1890s" (1987:555).

These guidelines assume that: 1) the nails were acquired soon after they were manufactured; 2) the nails were utilized soon after acquisition; and 3) the nails were used only once. In addition, since the site was occuppied from 1797 to present, one would expect hand-wrought, machine-cut, and wire nails all to be present within the assemblage.

Having taken heed of the problems and limitations of this form of analysis, it is still useful to scrutinize the frequencies and proportions of the nails that occur in Trench 2. The other trenches will not be considered due to the disturbed and mixed nature of the stratigraphy revealed in those units. Trench 2 produced 657 nails that could be catagorized as to type (Table 7-1).

Table 7-1: Frequencies and Percentages of Nails Collected

Trench #2	Hand-Wrought/%	Machine-Cut/%	Wire/%	N/%
FS#1	6/1.5	379/ 97.5	4/1.0	389/59.2
FS#2	0/0.0	68/ 94.4	4/5.6	72/10.9
FS#3	0/0.0	23/100.0	0/0.0	23/ 3.5
FS#4	0/0.0	0/ 0.0	0/0.0	0/ 0.0
FS#5	0/0.0	3/100.0	0/0.0	3/ 0.5
FS#6	0/0.0	51/100.0	0/0.0	51/ 7.8
FS#7	0/0.0	20/100.0	0/0.0	20/ 3.0
FS#8	0/0.0	19/100.0	0/0.0	19/ 2.9
FS#9	0/0.0	29/100.0	0/0.0	29/ 4.4
FS#10	0/0.0	51/100.0	0/0.0	51/ 7.8
FS#11	0/0.0	0/ 0.0	0/0.0	0/ 0.0
FS#12	0/0.0	0/ 0.0	0/0.0	0/ 0.0
Totals	6/0.9	643/ 97.9	8/1.2	657/100.0

The data above suggest dates ranging pre-1890 for FS#1-2 and pre-1855 for the remainder of the unit (Table 7-2).

Table 7-2: Comparison of Percentages of Nail Types, Tr. 2.

Trench #2	% Hand-Wrought	% Machine-Cut	% Wire	Date Range
FS#1	1.5	97.5	1.0	Pre-1890
FS#2	0.0	94.4	5.6	Pre-1890
FS#3	0.0	100.0	0.0	Pre-1855
FS#4	0.0	0.0	0.0	-
FS#5	0.0	100.0	0.0	Pre-1855
FS#6	0.0	100.0	0.0	Pre-1855
FS#7	0.0	100.0	0.0	Pre-1855
FS#8	0.0	100.0	0.0	Pre-1855
FS#9	0.0	100.0	0.0	Pre-1855
FS#10	0.0	100.0	0.0	Pre-1855
FS#11	0.0	0.0	0.0	-
FS#12	0.0	0.0	0.0	-

The dates derived from the nails in FS#1 suggest that the fill above the dairy feature was deposited at a later time from the debris in the bottom of the feature. The debris in FS#1 obviously resulted from the destruction of the "Faison House" in 1971. The 3.5' of fill comprising FS#2 possibly was deposited some time between 1890 and 1903 when the Badger/Faison House was either torn down or significantly renovated (Sanborn Tax Maps 1896 and 1903).

Ceramics

Trench 2 produced 194 ceramic sherds. These were divided into five major groups, refined earthenware, coarse earthenware, stoneware, porcellaneous ware, and porcelain (Table 7-3).

Table 7-3: Distribution of Ceramic Types, Trench 2

FS#	Fine Earth	Coarse Earth	Stone	Porcellaneous	Porcelain	N
1	59	0	13	0	24	96
2	10	0	1	0	3	14
3	2	0	3	0	1	6
4	4	0	1	0	0	5
5	1	0	0	0	0	1
6	12	3	0	2	1	18
7	8	0	3	0	2	13
8	4	0	3	0	3	10
9	8	1	1	0	3	13
10	8	0	6	0	3	17
11	0	0	0	0	0	0
12	0	0	1	0	0	1
Total	116	4	32	2	40	194

Earthenwares are ceramics made of slightly porous opaque clay fired at low temperatures. Refined earthenwares include creamware (Figure 7-1, A); pearlware (Figure 7-1, B); whiteware/ironstone (Figure 7-1, C); and lead-glazed wares (Figure 7-1, D). Coarse earthenwares consist of glazed and unglazed redwares (Figure 7-1, E). Stoneware is a strong, opaque ware that is high-fired, well-vitrified, and nonporous (Figure 7-1, F). The stonewares were divided according to glazing. Porcellaneous wares consist of white, opaque, highly-vitreous ceramics (Figure 7-1, G). Porcelains consist of hard, fine-grained, sonorous, nonporous, translucent white ceramic wares made essentially of kaolin, quartz, and feldspar and fired at high temperatures (Figure 7-1, H). Also included in the assemblage were varieties of Cantonese hand-painted porcelains (Figure 7-2). The definitions of the ceramic types used for this study are the same as those used by Orser et al. (1987:454-474).

A majority of the earthenwares consisted of pearlwares and whitewares. Pearlware comprised 36.7% of the total earthenwares (N=120) and 22.7% of the total ceramics. Whitewares comprised 28.3% of the total earthenwares and 17.5% of the total ceramics (Table 7-4).

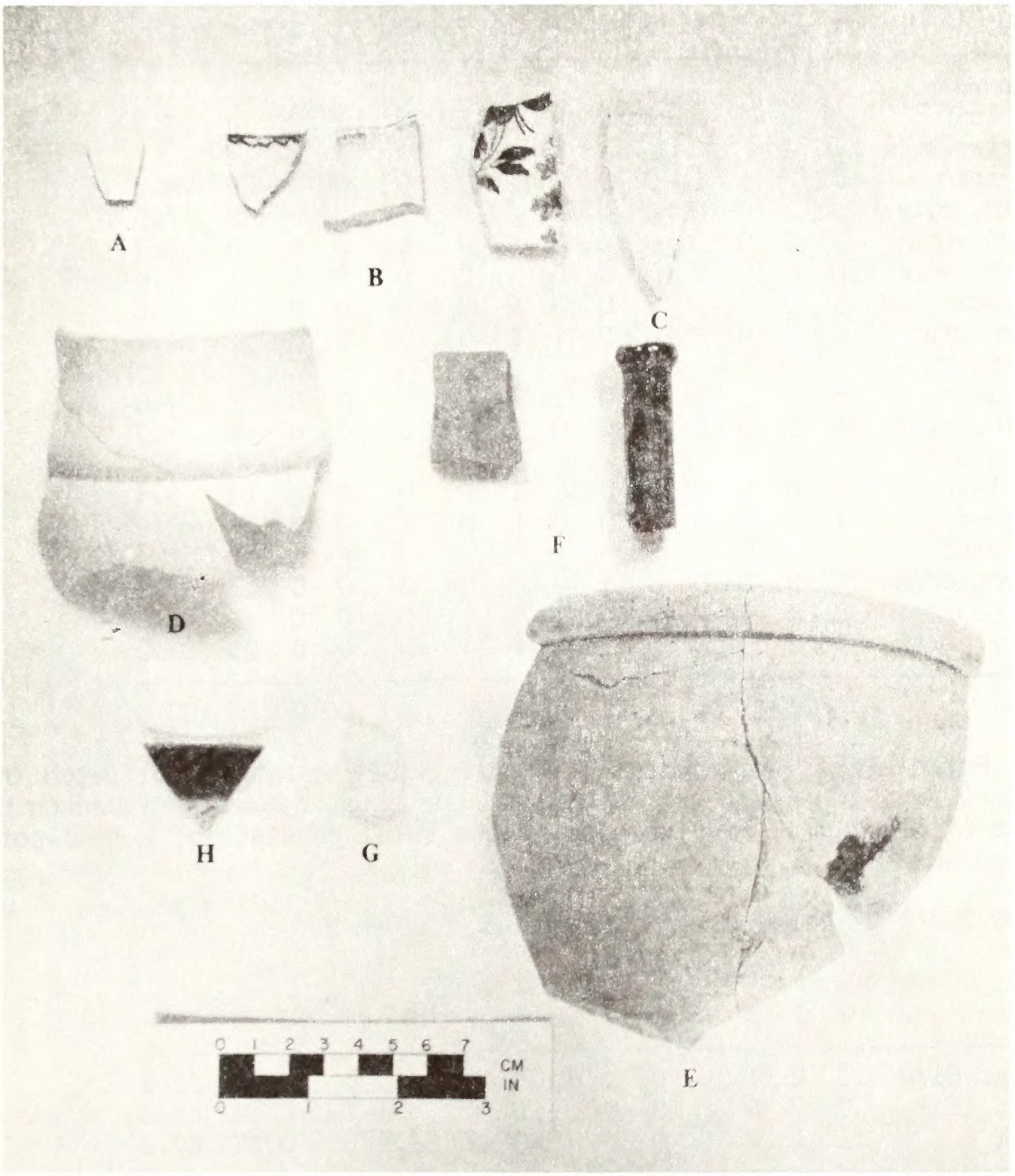


Figure 7-1: 31Wa656**, Range of Ceramics. A. creamware; B. pearlware; C. whiteware/ironstone; D. lead-glazed wares; E. red earthenwares; F. stoneware; G. porcellaneous wares; H. porcelain

Table 7-4: Distribution of Earthenwares, Trench 2

	FS#'s													
Type	1	2	3	4	5	6	7	8	9	10	11	12	N	%N
Creamware,														
plain	3	0	0	0	0	0	0	0	1	0	0	0	4	3.3
Pearlware,														
Plain	3	9	1	1	0	9	2	2	2	0	0	0	29	24.2
TP, blue	6	1	0	0	0	0	0	0	0	2	0	0	9	7.5
HP, poly	1	0	0	0	0	0	0	0	0	1	0	0	2	1.7
HP, mono	0	0	0	0	0	0	0	1	0	0	0	0	1	0.8
Shell, bl	1	0	0	0	0	0	0	0	0	0	0	0	1	0.8
annular	1	0	0	0	0	0	1	0	0	0	0	0	2	1.7
Whiteware,														
plain	23	0	0	1	1	0	1	0	1	3	0	0	30	25.0
TP, blue	4	0	0	0	0	0	0	0	0	0	0	0	4	3.3
Ironstone,														
plain	7	0	0	2	0	0	0	1	0	0	0	0	10	8.3
wheat	1	0	0	0	0	0	0	0	0	0	0	0	1	0.8
Redware,														
unglazed	0	0	0	0	0	3	0	0	0	0	0	0	3	2.6
iron oxide	0	0	0	0	0	0	0	0	1	0	0	0	1	.8
Other earth	9	0	1	0	0	3	4	0	4	2	0	0	23	19.2
Totals	59	10	2	4	1	15	8	4	9	8	0	0	120	100.0

Porcelains comprised 20.6% of the total ceramics collected by this project (N=40). Fifty two percent of the total consists of Canton blue on white (Table 7-5). Five percent of the total consists of a semi-porcelain gilded ware.

Table 7-5: Distribution of Porcelains, Trench 2

	FS#'s													
Type	1	2	3	4	5	6	7	8	9	10	11	12	N	%N
Canton Bl/W	13	2	0	0	0	1	0	3	1	1	0	0	21	52.5
Semi, gilt	0	0	0	0	0	0	1	0	0	1	0	0	2	5.0
Other	11	1	1	0	0	0	1	0	2	1	0	0	17	42.5
Totals	24	3	1	0	0	1	2	3	3	3	0	0	40	100.0

Mean ceramic dates (y) were calculated for each field specimen using South's (1977) formula:

$$y = \frac{f(x)}{f}$$

where f is the ceramic type frequency and x is the median manufacturing date.

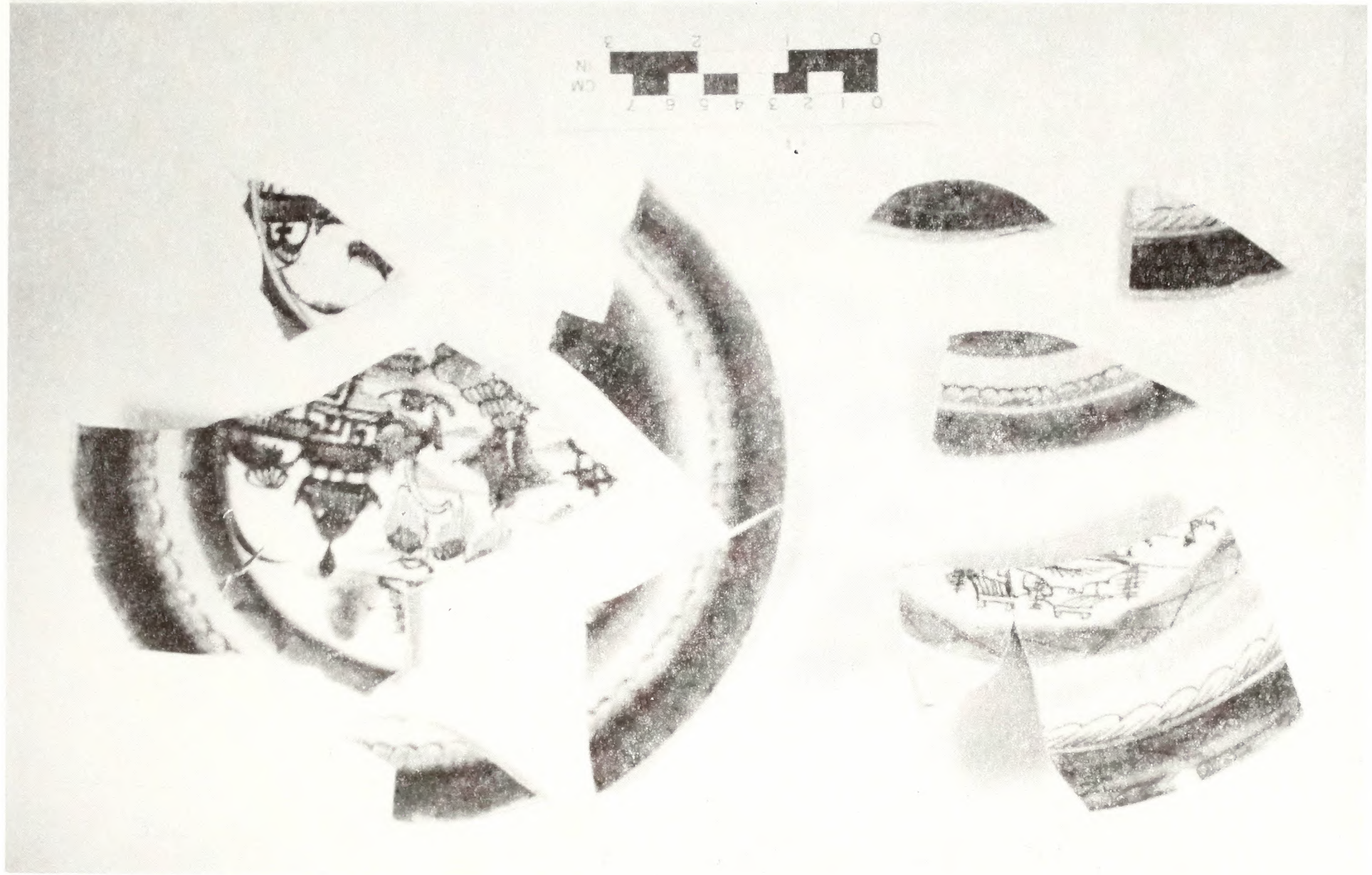


Figure 7-2: 31Wa656**, Cantonese Hand-painted porcelains

Fine earthenwares and porcelains were used to compute the mean ceramic dates for this study. The following date ranges and median dates were used for these computations (South 1977:210-212; Orser, et al. 1987:526; Trinkley 1986:227).

Ceramic Type	Date Range	Median Date
Creamware,		
plain	1762 - 1820	1791
Pearlware,		
plain	1780 - 1830	1805
transfer-print, blue	1795 - 1840	1818
hand painted monochrome	1780 - 1830	1805
" polychrome	1795 - 1815	1805
shell-edge, blue	1780 - 1830	1805
annular	1790 - 1820	1805
Whiteware/ironstone		
plain	1820 - 1925	1872.5
transfer-print, blue	1820 - 1925	1872.5
" , other	1825 - 1925	1875
" , gilt	1900 - 1950	1925
sponged	1830 - 1860	1845
Porcelain		
Canton blue on white	1800 - 1830	1815
semi, gilt	1900 - 1950	1925

Field Specimen #1

Field Specimen #1 produced 96 ceramic sherds (Table 7-3). Fine earthenwares and porcelains were the most abundant types of ceramics recovered (Table 7-6). These wares comprised 52.1% and 25% respectively of the total number of ceramics collected from this field specimen.

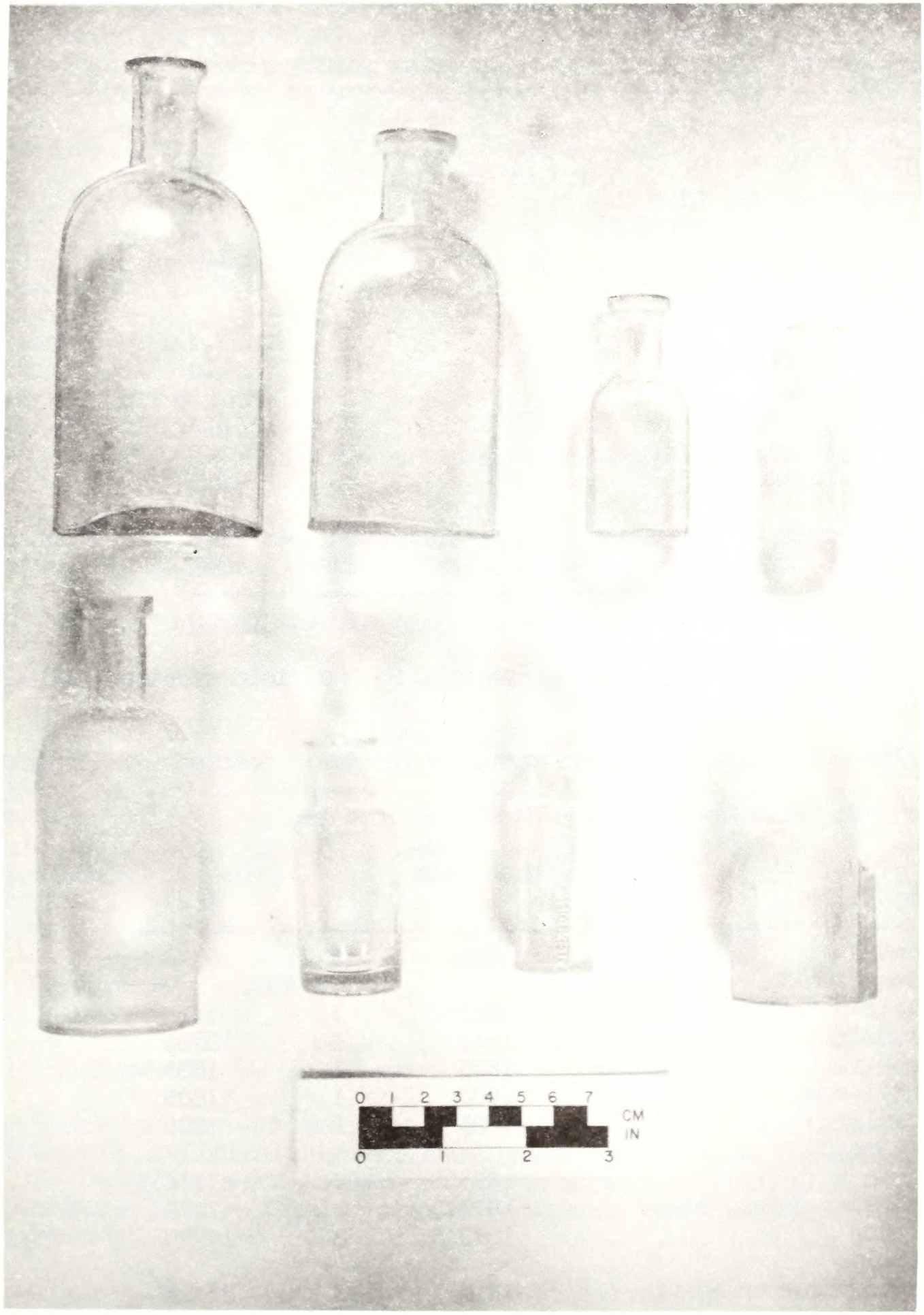


Figure 7-3: 31Wa656: Glassware

Table 7-6: Distribution of Fine Earthenwares and Porcelains, Field Specimen #1

Type	N	%N
Creamware,		
plain	3	3.6
Pearlware,		
plain	3	3.6
transfer-print, blue	6	7.2
hand painted, polychrome	1	1.2
shell-edge, blue	1	1.2
annular	1	1.2
Whiteware,		
plain	23	27.7
transfer-print	4	4.8
Ironstone,		
white, plain	7	8.4
wheat pattern	1	1.2
Other earthenware	9	10.8
Porcelain,		
Canton blue on white	13	15.8
other porcelains	11	13.3
Total	83	100.00

Whiteware was the most abundant ceramic in the field specimen, with 28.13% of the total sherds collected.

The mean ceramic date was computed for Field Specimen #1 (Table 7-7).

Table 7-7: Mean Ceramic Date, Field Specimen #1

Ceramic Type	Mean Date (x)	(f)	f(x)
Creamware	1791	3	5373
Pearlware,			
plain	1805	3	5415
transfer-print, blue	1818	6	10908
hand painted, polychrome	1805	1	1805
shell-edge, blue	1805	1	1805
annular	1805	1	1805
Whiteware,			
plain	1875.5	23	43136.5
transfer-print, blue	1872.5	4	7490
Ironstone	1872.5	8	14980
Porcelain,			
Canton blue on white	1815	13	23595

Mean Ceramic Date = **1846.2**

Field Specimen #2

Field Specimen #2 produced 14 pieces of ceramics (Table 7-3). Fine earthenwares and porcelains were again the most abundant types of ceramics recovered (Table 7-8). These wares comprised 71.4% and 21.4% respectively of the total number of ceramics collected from this field specimen.

Table 7-8: Distribution of Fine Earthenwares and Porcelains, Field Specimen #2

Type	N	%N
Pearlware,		
plain	9	69.2
transfer-print, blue	1	7.7
Porcelains,		
Canton blue on white	2	15.4
other porcelain	1	7.7
Total	13	100.0

Pearlware was the most abundant ceramic type found within the field specimen, 71.4% of the total sherds collected.

The mean ceramic date was computed for Field Specimen #2 (Table 7-9).

Table 7-9: Mean Ceramic Date, Field Specimen #2

Ceramic Type	Mean Date (x)	(f)	f(x)
Pearlware			
plain	1805	9	16245
transfer-print, blue	1818	1	1818
Porcelain,			
Canton blue on white	1815	2	3630
Mean Ceramic Date = **1807.8**			

Field Specimen #3

Field Specimen #3 produced 6 pieces of ceramics (Table 7-3). Fine earthenwares and porcelains were equally distributed with stonewares (Table 7-10). The fine earthenwares and porcelains comprised 33.3% and 16.7% respectively of the total number of ceramics collected from this field specimen.

Table 7-10: Distribution of Fine Earthenwares and Porcelains, Field Specimen #3

Type	N	%N
Pearlware		
plain	1	33.3
Other Fine Earthenware	1	33.3
Porcelain		
other porcelain	1	33.3
Total	3	99.9

No one particular type of ceramic was in the majority in this field specimen.

The mean ceramic date was computed for Field Specimen #3 (Table 7-11).

Table 7-11: Mean Ceramic Date, Field Specimen #3

Ceramic Type	Mean Date (x)	(f)	f(x)
Pearlware			
plain	1805	1	1805
Mean Ceramic Date = **1805**			

Field Specimen #4

Field Specimen #4 produced 5 pieces of ceramics (Table 7-3). Fine earthenwares were the most abundant types of ceramics recovered (Table 7-12). These wares comprised 80% of the total number of ceramics collected from this field specimen.

Table 7-12: Distribution of Fine Earthenwares, Field Specimen #4

Type	N	%N
Pearlware,		
plain	1	25.0
Whiteware,		
plain	1	25.0
Ironstone		
plain	2	50.0
Total	4	100.0

Ironstone was the most abundant ceramic type found within the field specimen, 40.0% of the total sherds collected.

The mean ceramic date was computed for Field Specimen #2 (Table 7-13).

Table 7-13: Mean Ceramic Date, Field Specimen #4

Ceramic Type	Mean Date (x)	(f)	f(x)
Pearlware plain	1805	1	1805
Whiteware, plain	1875.5	1	1875.5
Ironstone, plain	1872.5	2	3745

Mean Ceramic Date = **1856.4**

Field Specimen #5

Field Specimen #5 produced 1 piece of ceramics (Table 7-3). A fine earthenware sherd was the only type of ceramic recovered (Table 7-14).

Table 7-14: Distribution of Fine Earthenwares, Field Specimen #5

Type	N	%N
Whiteware, plain	1	100.0

The mean ceramic date was computed for Field Specimen #5 (Table 7-15).

Table 7-15: Mean Ceramic Date, Field Specimen #5

Ceramic Type	Mean Date (x)	(f)	f(x)
Whiteware, plain	1875.5	1	1875.5

Mean Ceramic Date = **1875.5**

Field Specimen #6

Field Specimen #6 produced 18 pieces of ceramics (Table 7-3). Fine earthenwares were the most abundant types of ceramics recovered (Table 7-16). These wares comprised 66.7% of the total number of ceramics collected from this field specimen.

Table 7-16: Distribution of Earthenwares and Porcelains, Field Specimen #6

Type	N	%N
Pearlware,		
plain	9	50.0
Other Fine Earthenware	3	16.7
Redware,		
unglazed	3	16.7
Porcellaneous	2	11.1
Porcelain,		
Canton blue on white	1	5.5
Total	18	100.0

Pearlware was the most abundant ceramic type found within the field specimen, 50.0% of the total sherds collected.

The mean ceramic date was computed for Field Specimen #6 (Table 7-17).

Table 7-17: Mean Ceramic Date, Field Specimen #6

Ceramic Type	Mean Date (x)	(f)	f(x)
Pearlware			
plain	1805	9	16245
Porcelain,			
Canton blue on white	1815	1	1815
Mean Ceramic Date = **1806**			

Field Specimen #7

Field Specimen #7 produced 13 ceramic sherds (Table 7-3). Fine earthenwares and porcelains were the most abundant types of ceramics recovered (Table 7-18). These wares comprised 61.5% and 15.4% respectively of the total number of ceramics collected from this field specimen.

Table 7-18: Distribution of Fine Earthenwares and Porcelains, Field Specimen #7

Type	N	%N
Pearlware,		
plain	2	20.0
annular	1	10.0
Whiteware,		
plain	1	10.0
Other fine earthenwares	4	40.0
Porcelain,		
semi, gilt	1	10.0
other porcelains	1	10.0
Total	10	100.00

Pearlware was the most abundant ceramic in the field specimen, with 23.1% of the total sherds collected.

The mean ceramic date was computed for Field Specimen #7 (Table 7-19).

Table 7-19: Mean Ceramic Date, Field Specimen #7

Ceramic Type	Mean Date (x)	(f)	f(x)
Pearlware,			
plain	1805	2	3610
annular	1805	1	1805
Whiteware,			
plain	1875.5	3	5626.5
Porcelain,			
semi, gilded	1925	1	1925

Mean Ceramic Date = **1852.4**

Field Specimen #8

Field Specimen #8 produced 10 ceramic sherds (Table 7-3). Fine earthenwares and porcelains were the most abundant types of ceramics recovered (Table 7-20). These wares comprised 40.0% and 30.0% respectively of the total number of ceramics collected from this field specimen.

Table 7-20: Distribution of Fine Earthenwares and Porcelains, Field Specimen #8

Type	N	%N
Pearlware,		
plain	2	28.6
hand-painted, monochrome	1	14.3
Ironstone,		
plain	1	14.3
Porcelain,		
Canton blue on white	3	42.8
Total	7	100.00

Porcelain and pearlware were the most abundant ceramics in the field specimen, each with 30.0% of the total sherds collected.

The mean ceramic date was computed for Field Specimen #8 (Table 7-21).

Table 7-21: Mean Ceramic Date, Field Specimen #8

Ceramic Type	Mean Date (x)	(f)	f(x)
Pearlware,			
plain	1805	2	3610
hand-painted, monochrome	1800	1	1800
Ironstone,			
plain	1872.5	1	1872.5
Porcelain,			
Canton blue on white	1815	3	5445

Mean Ceramic Date = **1818.2**

Field Specimen #9

Field Specimen #9 produced 13 ceramic sherds (Table 7-3). Fine earthenwares and porcelains were the most abundant types of ceramics recovered (Table 7-22). These wares comprised 61.5% and 23.1% respectively of the total number of ceramics collected from this field specimen.

Table 7-22: Distribution of Fine Earthenwares and Porcelains, Field Specimen #9

Type	N	%N
Creamware		
plain	1	8.3
Pearlware,		
plain	2	16.7
Whiteware,		
plain	1	8.3
Other fine earthenware	4	33.3
Redware		
iron oxide glaze	1	8.3
Porcelain,		
Canton blue on white	1	8.3
other porcelains	2	16.7
Total	12	99.9

The mean ceramic date was computed for Field Specimen #9 (Table 7-23).

Table 7-23: Mean Ceramic Date, Field Specimen #9

Ceramic Type	Mean Date (x)	(f)	f(x)
Creamware	1791	1	1791
Pearlware,			
plain	1805	2	3610
Whiteware,			
plain	1875.5	1	1875.5
Porcelain,			
Canton blue on white	1815	1	1815

Mean Ceramic Date = **1818**

Field Specimen #10

Field Specimen #10 produced 17 ceramic sherds (Table 7-3). Fine earthenwares were the most abundant types of ceramics recovered (Table 7-24). These wares comprised 47.1% of the total number of ceramics collected from this field specimen.

Table 7-24: Distribution of Fine Earthenwares and Porcelains, Field Specimen #10

Type	N	%N
Pearlware,		
transfer-print, blue	2	18.2
hand-painted, polychrome	1	9.1
Whiteware,		
plain	3	27.2
Other fine earthenware	2	18.2
Porcelain,		
Canton blue on white	1	9.1
semi, gilded	1	9.1
other porcelains	1	9.1
Total	11	100.0

The mean ceramic date was computed for Field Specimen #10 (Table 7-25).

Table 7-25: Mean Ceramic Date, Field Specimen #10

Ceramic Type	Mean Date (x)	(f)	f(x)
Pearlware,			
hand-painted, monochrome	1805	1	1805
transfer-print, blue	1818	2	3636
Whiteware,			
plain	1875.5	3	5626.5
Porcelain,			
Canton blue on white	1815	1	1815
semi, gilt	1925	1	1925

Mean Ceramic Date = **1850.9**

The mean ceramic dates for Trench 2 are tabulated in Table 7-26. The date range for the dairy feature fill, excluding FS#1, is between 1805-1875.5, with a median date for the whole feature equaling 1832.2. This range possibly has some bearing on when the dairy was used for its primary function. These figures, however, are probably not an accurate estimate of when the feature was filled and capped with cement. One cross-mended ceramic piece found in two different proveniences, one in FS#7 and the other in FS#10, has a date range from the last decade of the 19th century through the first half of the 20th century. This piece is a small, gilded semi-porcelain saucer. The piece is model 3219 possibly manufactured by Spode China Works in England (Brad Rauschenberg, personal communication, 1988). Regardless of the point of origin, the morphology of the piece indicates a late date of manufacture, probably around 1890-1900 (Brad Rauschenberg and Michael Hammond, personal communication, 1988).

Table 7-26: Mean Ceramic Dates, All Field Specimens

Field Specimen	Mean Ceramic Date
1	1846.2
2	1807.8
3	1805
4	1856.4
5	1875.5
6	1806
7	1852.4
8	1818.2
9	1818
10	1850.9
11	-
12	-

The position of this piece of ceramic within the feature obviates any possiblility of intrusion..

Stonewares were less abundant than earthenwares and porcelains. Thirty two sherds of stoneware were recovered from the excavations in Field Specimen #2 (Table 7-27).

Table 7-27: Distribution of Stoneware Types, Trench 2

	FS#'s													
Type	1	2	3	4	5	6	7	8	9	10	11	12	N	%N
Iron Oxide	1	1	0	0	0	0	0	0	0	1	0	1	4	12.5
Salt glaze	1	0	0	1	0	0	0	0	1	1	0	0	4	12.5
White glaze	11	0	1	0	0	0	0	2	0	0	0	0	14	43.8
Alkaline	0	0	1	0	0	0	0	0	0	0	0	0	1	3.1
Copper Oxide	0	0	0	0	0	0	1	0	0	1	0	0	2	6.3
Lead	0	0	0	0	0	0	0	1	0	2	0	0	3	9.3
Other	0	0	1	0	0	0	2	0	0	1	0	0	4	12.5
Totals	14	1	3	1	0	0	3	3	1	6	0	1	32	100.0

Flat Glass

The term "flat glass" refers to window glass and mirrors, but only window glass was recovered within Trench 2. The use of window glass as a dating tool was first attempted by Grosscup and Miller (1969) when thicker window glass appeared in the upper levels of excavations at Walker Tavern. This concept was greatly expanded by Roenke (1978) who found a general tendency for flat glass to become thicker throughout the nineteenth century. This trend was established by Roenke for flat glass in the Pacific Northwest and further supported by data from the Waverly Plantation site in Mississippi (Rothman 1980. Similar patterns have been seen elsewhere in the southeastern United States by Trinkley (1986) and Orser et al. (1987).

The use of flat glass as a relative dating technique is underlain by a group of assumptions discussed at length by Roenke (1978), Jones and Sullivan (1985), and Orser et al. (1987). These assumptions consist of the following:

1. buildings constructed at the same time will show a single mode of glass thickness (Roenke 1978; Orser et al. 1987)

2. later construction at a site would produce a second mode of glass thickness (Roenke 1978; Orser et al. 1987)

3. whole window panes are rare within an archeological context (Jones and Sullivan 1985)

4. window glass from a known structure is more reliable for dating than glass from a midden or trash pit (Jones and Sullivan 1985).

These assumptions suggest the need for caution when using flat glass as the sole technique for dating.

Jones and Sullivan suggest that a fairly large sample of flat glass would be necessary for use as a chronological tool (1985:172). The sample size from Trench 2 (N=380) is quite small in comparison to the samples used Roenke (1978), N=21,000, and Orser et al. (1987), N=4860. Anomalous dates generated for this study by this technique may be due to the small sample size available from Trench 2.

Mindful of the assumptions and limitations of this technique, the thickness of flat glass was measured using Gneupel calipers to the nearest hundredth of a millimeter and recorded by field specimen number (Table 7-28). Based on the analysis of Roenke (1978) and Rothman (1980), and Orser et al. (1987) the relative dating of the field specimens in Trench 2 could be accomplished based on the modes of flat glass thickness in the assemblage. Orser et al. computed the data presented by Roenke (1978) as a regression formula. This formula is represented by the equation:

$$y = 41.46x + 1762.76$$

where:
- y = the derived date
- x = the thickness of the flat glass in mm.
- 41.46 = the slope of the regression line
- 1762.76 = the y-intercept

This formula produced a correlation coefficient between date and modal thickness of +.94 indicating a nearly one to one relationship between the two variables (Orser et al. 1987:542). Rothman (1980) found a date discrepancy of +35 to +80 years between the glass from the Southeast and that from the Pacific Northwest (Orser et al. 1987). To compensate for this anomaly, Orser took the mean of the date discrepancy, +53.75 years, and applied it as a transformation factor for the dates at Millwood Plantation in South Carolina (1987:542). Trinkley also used this formula for dates on flat glass at the Fish Haul Site in South Carolina (1986:241).

The dates for the field specimens in Trench 2 are presented in Table 7-28.

Table 7-28: Distribution of Flat Glass Thickness, Trench #2

Field Specimen	n/N	Mode (mm.)	Mean (mm.)	Mean Date
1	81/88	1.52	1.98	1898.6
2	24/25	1.52	1.65	1884.9
3	38/38	1.52	1.57	1881.6
4	25/30	1.52	1.60	1882.8
5	3/3	1.52	1.62	1883.7
6	28/29	1.52	0.73	1888.2
7	34/36	1.52	1.55	1880.8
8	16/20	1.52	1.50	1878.7
9	51/52	1.52	1.50	1878.7
10	41/46	1.52	1.45	1876.6
11	3/4	1.78	1.57	1881.6
12	8/9	1.27	1.37	1873.3

The data above suggest the following date ranges for the field specimens in Trench 2 (Table 7-29).

Table 7-29: Date Ranges Between Field Specimens, Trench 2

Field Specimen	Date Range	Modal Date
1	1858.8-1953.3	1879.5
2	1890.3-1897.5	1897.5
3	1879.5-1881.6	1879.5
4	1869.2-1900.7	1879.5
5	1879.5-1883.7	1879.5
6	1879.5-1900.7	1879.5
7	1879.5-1890.3	1879.5
8	1858.8-1879.5	1879.5
9	1858.8-1879.5	1879.5
10	1858.8-1879.5	1879.5
11	1881.6-1890.3	1890.3
12	1869.2-1879.5	bimodal: 1869.2, 1879.5

Most of the dates cluster around a range of 1879-1897. The dates are also fairly consistent throughout the entire feature suggesting rapid filling.

A Comparison of the Temporal Data

A comparison of the date ranges for nails, mean dates for ceramics, and modal dates for flat glass shows a set of dates which range across the entire 19th century (Table 7-30). The figures presented in this table are rounded off to the nearest year.

Table 7-30: Comparative Dates For Artifacts in Trench 2

FS#	Nails	Ceramics	Flat Glass
1	Pre-1890	1846	1880
2	Pre-1890	1808	1898
3	Pre-1855	1805	1880
4	-	1856	1880
5	Pre-1855	1876	1880
6	Pre-1855	1806	1880
7	Pre-1855	1852	1880
8	Pre-1855	1818	1880
9	Pre-1855	1818	1880
10	Pre-1855	1851	1880
11	-	-	1890
12	-	-	1869-1880

According to historical documents, a sizable structure (the Badger House) was within the area surrounding Trench #2 by 1847. In addition, it is suspected that an earlier structure was incorporated into the Badger House (Angley and Crow 1988:10). The building of 1847 was not altered until after 1896 (Sanborn Tax Maps). The high percentage of machine-cut nails throughout the unit suggests that the structure was indeed altered and not completely torn down. This would explain the temporal range for nails. The range of ceramics mirrors the time period which the area has been inhabited historically. The older dates probably result from curated pieces and/or debris that accummulated over time. The proponderance of older ceramics also supports the notion that the house was radically altered rather than torn completely down. The process of tearing down and grading for a new structure would have probably removed a significant portion of the older ceramic debris and replaced them with the debris of the later occupation. This was not noted in either the fill from the structure destroyed in 1971 (FS#1) or in the dairy (FS#'s 2-12). The flat glass is probably representative of the approximate time the structure was altered and the dairy was filled. According to Angley and Crow, Annie Badger Faison died in 1898 and,

> "It was to be several years before a final disposition of their (the Faison's) Edenton Street property could be made.
>
> In February of 1904 the Faison lots on both Edenton and Halifax streets were sold at public auction for the benefit of Annie H. Faison's heirs. The Edenton Street property contained the Faison residence and the major portion of the former Badger property. However, the frontage along Edenton Street had been reduced from ninety-seven feet to seventy feet, and the Sanborn Insurance maps of 1896 and 1903 indicate that major changes had occurred on the property. The earlier map shows the continuing presence of the large home erected by George E. Badger about a half century before. The later map records the presence of a sizeable but much smaller house with an entirely different configuration, although both houses were indicated to be two-story frame dwellings" (1988:18-19).

This scenario suggests several possibilities: 1) either the house was altered between 1896 and 1898 by Ms. Faison; 2) the house was altered after 1898 by the Faison heirs, perhaps to increase the value of the property for sale; 3) the house was inhabited by one of the heirs and altered after 1898; 4) the house was uninhabited and altered between 1898 and 1903; or 5) alteration was begun by Ms. Faison between 1896 and 1898 and finished by the heirs sometime between 1898 and 1903. Regardless of what occurred it is apparent that the dairy feature was filled sometime around 1900. The gilded semi-porcelain saucer from FS7 and FS10 was the major clue to the time of filling. The presence of this late ceramic type near the bottom of the feature fill and the fact that the saucer was a cross-mend between two proveniences strongly suggests that the dairy was filled rapidly, probably with the intention to lay the cement floor at the time the house was altered. Large, rough-cut stones used as a pier were found over the dairy feature on the cement floor. It is possible that these stones were part of the original foundation of the George Badger House.

A Discussion of the Artifact Groups and Artifact Patterns

South's (1977) artifact pattern analysis concentrates on the frequencies of specific artifact groups as indicatores of past activities (i.e. domestic, industrial, military, etc.). According to South the basic postulates are.

> "1. British Colonial behavior should reveal regularities in patterning in the archaeological record from British Colonial sites; and 2. specialized behavioral activities should reveal contrasting patterns on such sites" (1977:88).

The basic assumption is that each household within colonial and antebellum society represents a system within a larger system that imposes a degree of uniformity in the relationship among its behavioral parts (South 1977:87-88).

The Carolina artifact pattern provides a means by which to compare average domestic dwellings of the eighteenth and nineteenth centuries to each other and to other more specialized sites such as smiths, potters and millers. The Carolina artifact patten focuses primarily on the middle class. Drucker's (1981, 1984) Piedmont Tenant/yeomen artifact pattern is representative of lower and/or indigent domestic structures of the same relative time frame.

A total of 3,486 artifacts from the twelve field specimens was classified into eight artifact groups (South 1977:95-96). Unidentified metal fragments were not used for this analysis. Two additional groups, a food and miscellaneous group, are discussed elsewhere in this chapter. The frequencies and percentages of these groups are summarized by field specimen in Table 7-31.

Table 7-31: Artifact Group Frequencies and Percentages, TR2

FS#	Kit N/%	Arch N/%	Furn N/%	Arms N/%	Cloth N/%	Per N/%	Tob N/%	Act N/%	N/%
1	225	740	0	1	4	6	0	618	1594
	14.1	46.4	0.0	0.1	0.3	0.4	0.0	38.7	100.0
2	57	155	0	0	2	0	0	44	258
	22.1	60.1	0.0	0.0	0.8	0.0	0.0	17.0	100.0
3	27	66	1	0	0	0	0	7	101
	26.7	65.4	0.9	0.0	0.0	0.0	0.0	7.0	100.0
4	103	53	0	1	1	0	0	14	172
	59.9	30.8	0.0	0.6	0.6	0.0	0.0	8.1	100.0
5	17	9	0	0	0	0	0	1	27
	63.0	33.3	0.0	0.0	0.0	0.0	0.0	3.7	100.0
6	202	94	0	0	1	4	0	5	306
	66.0	30.7	0.0	0.0	0.3	1.3	0.0	1.7	100.0
7	113	67	1	0	0	2	0	41	224
	50.5	29.9	0.5	0.0	0.0	0.9	0.0	18.2	100.0
8	35	91	1	1	0	1	0	22	151
	23.2	60.3	0.7	0.7	0.0	0.7	0.0	14.4	100.0
9	86	177	4	0	1	3	0	43	314
	27.4	56.4	1.3	0.0	0.3	1.0	0.0	13.6	100.0
10	53	200	0	1	0	8	0	38	300
	17.7	66.7	0.0	0.3	0.0	2.7	0.0	12.6	100.0
11	1	19	0	0	0	0	0	3	23
	4.4	82.6	0.0	0.0	0.0	0.0	0.0	13.0	100.0
12	4	12	0	0	0	0	0	0	16
	25.0	75.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
Total									3486

The artifact groups from Trench #2 were studied to determine the patterning among the groups. The mean frequencies were computed from the ranges listed for each artifact group from the field specimens within the unit. Field Specimen #1 was considered separately from the rest of the proveniences due to the separation between these groups. This information was summarized and compared to established artifact patterns derived by South (1977) and Drucker (1981) (Table 7-32 and Table 7-33).

Table 7-32: Artifact Groups, Mean Values, FS #1

Artifact Group	Mean %
Kitchen	14.1
Architecture	46.4
Furniture	0.0
Arms	0.1
Clothing	0.3
Personal	0.4
Tobacco	0.0
Activities	38.7

Table 7-33: Artifact Groups, Range and Mean Values, FS #'s 2-12

Artifact Group	Range %	Mean %
Kitchen	4.4-66.0	35.1
Architecture	29.9-82.6	48.3
Furniture	0.0- 1.3	0.3
Arms	0.0- 0.7	0.2
Clothing	0.0- 0.8	0.2
Personal	0.0- 2.7	0.7
Tobacco	0.0- 0.0	0.0
Activities	0.0-18.2	9.9

These figures are closest to that described for the Piedmont Tenant/Yeoman Artifact Pattern (Drucker et al 1984; Trinkley 1986). The Piedmont Tenant/Yeoman Artifact Pattern was presented by Trinkley (1986:263) with the following range and mean values:

Piedmont Tenant/Yeoman Artifact Pattern

Artifact Group	Range %	Mean %
Kitchen	40.0-61.2	45.6
Architecture	35.8-56.3	50.0
Furniture	-	0.4
Arms	-	-
Clothing	-	1.8
Personal	-	0.4
Tobacco	-	-
Activities	-	1.8

This pattern was not expected given the particular history of the study area. One would have expected the Carolina Pattern. It is possible that major renovation efforts and eventual destruction of the structure inflated the percentage of the architecture group.

A Discussion of Socioeconomic Status

Identification of the Piedmont Tenant/Yeoman artifact pattern raises some questions when compared to the historical record concerning the socioeconomic status of past inhabitants of the site. Spencer-Wood (n.d.) has measured the socioeconomic status of site residents by their occupations and the value of personal estates in probate inventories. An average status index for sites was calculated from the value of personal estates weighted with the number of years of individual residence at a site (Spencer-Wood n.d.:13). For this study information from probate inventories was not available, but some occupations were known. Table 7-34 lists some of the residents on 31Wa656 and their occupations.

Table 7-34: List of Occupations of Select Individuals, 31Wa656*

Date	Name	Occupation
1797	John Haywood	politician
1800	John Ingles	planter
1807	Jehu Scott	silversmith
1817	Moses Mordecai	lawyer/planter
1819	John Y. Savage	siversmith/clockmaker
1830	Gavin Hogg	lawyer/businessman
1830	George W. Mordecai	lawyer/businessman
1831	William Thompson	cabinetmaker
1834	E.P. Guion	businessman
1834	Fabius J. Haywood	physician
1838	George E. Badger	lawyer/judge/politician
1879	William Worrell Vass	railroad executive
1879	Paul F. Faison	cotton merchant
1879	Thomas Badger	mayor of Raleigh
1904	R. S. McGeachy	physician
1909	Walter Clark	Chief Justice
1909	Fabius J. Haywood, Jr.	physician
1909	William A. Lodge	druggist
1909	Romulus D. Godwin	lumber dealer
1909	Russell D. Sherrill	dentist
1910	Flora Heflin	landlady of a boarding house

* Source: Angley and Crow (1988).

The historic data indicate that a large number of the inhabitants on 31Wa656 were solid upper middle to upper class members of Raleigh, especially early in the development of the community.

Spencer-Wood (n.d.) also used Miller's (1980) ceramic price scaling indices to relate consumer choice to socioeconomic status. According to Spencer-Wood,

> "Miller's index is based on acquisition prices for decorative types of ceramic cups and saucers, plates and bowls during their period of primary manufacture. British potters' and American

> distributors' price lists were used to calculate ratios representing the cost of other ceramic ware and decorative types relative to undecorated cream colored ware because it was the least expensive type. The price ratios were calculated according to years with records of primary manufacture and distribution of ceramic types in America, and does not include second hand or other secondary prices far removed from manufacture dates. Separate indices were calculated for cups and saucers, plates, and bowls from price lists in a sequence of years representing nearly every decade from 1770 to 1881 for cups and saucers, from 1787 to 1874 for plates, and from 1802 to 1858 for bowls. Miller's ceramic index is normally used by selecting an index year and multiplying these ratios of ceramic prices by the quantities of each decorative type recovered archaeologically. Dividing the sum of these products by the total number of artifacts yields the weighted mean cost ratio of the archaeological sample" (n.d.:14-15).

As a part of Spencer-Wood's analysis a slight modification to Miller's scheme was used which ranked sites according to sherd counts rather than actual vessel counts. The indices used for cups and saucers, plates, and bowls were averaged into one set of index values. This technique was applied to the sherd counts from Trench 2 since a majority of the ceramics collected were fragmentary and impossible to categorize according to vessel count.

For this analysis the ceramics from Trench 2 are considered as a sub-sample of the total archaeological assemblage at 31Wa656. Without knowledge of the "universe" in a statistical sense it is impossible to know just what portion is being sampled; however, this exercise will be used merely to make inferences regarding the socioeconomic status ranking of the structure (or set of structures) represented in Trench 2 rather than make statements regarding the rank orders of all the structures represented archeologically on the site. The data presented in Tables 7-4 and 7-5 were used to calculate the rank order for Trench 2. All field specimens were combined for calculation based on the results of the temporal analysis which suggest a relatively late fill date for the dairy feature (Table 7-35).

Table 7-35: Ceramic Index Rank Order, Trench 2

Ceramic Type	N	Mean Value (Sherd Index)*	N(SI)
Porcelain	40	5.40	216.00
Transfer Printed	13	2.51	32.63
Ironstone	11	2.51	27.61
Rim Lined	2	1.69	3.38
Hand Painted	3	1.56	4.68
Edged	1	1.00	1.00
Pearlware	59	1.64	96.76
Creamware	4	1.00	4.00
Totals	133		386.06

Rank Order = **2.90**
* Source: Spencer-Wood (n.d.)

The rank order calculated for Trench #2 was compared to the rank order of the highest occupational status households used by Spencer-Wood in Quincy, Massachusetts. This was used because of lack of comparable data from Raleigh. The rank orders for the highest status sites/houses from Qunicy equaled 2.65 and 2.20 (Spencer-Wood n.d.). These households used by Spencer-Wood were basically middle-class. The rank order calculated for Trench 2 well exceeds these figures.

One further measure of status is the proportional use of low and high valued ceramics. According to Spencer-Wood,

> "The highest occupational status is expected to produce the highest proportions of porcelain, nearly as high proportions of high valued whiteware (transfer printed), low proportions of ironstone and relatively high proportions of low valued ceramics" (n.d.:31).

The figures from Table 7-35 were used to calculate the percentage of ceramic types (Table 7-36).

Table 7-36: Percent of Ceramic Type According to Value

Porcelain	Transfer Printed	Ironstone	Low Valued Ceramics
30.08% (40)	9.77% (13)	8.27% (11)	51.88% (69)

The percentages for Trench 2 show the highest values on both ends of the spectrum. This may be the result of increased use of low valued wares after 1900 when the structure was used as a boarding house; differences in regional supply and demand of high value wares; or a collection bias. Regardless, the known occupations of the inhabitants, the rank order figures, and the relatively high percentage of porcelains confirm that the socioecomonic status of this area was high, especially during the 19th century. The inflated percentage figures for the architecture artifact

group may have resulted from the fact that the excavation unit basically framed the interior of the structure. One might expect more artifacts from that group in such a situation; therefore, the Tenant/Yeoman pattern may be a result of collection bias.

A Discussion of Land Usage

Quantification of the degree of urbanization in an area has been discussed by Rothschild and Rockman (1982) and Rubertone (1982). They suggest that quantitative measures are useful in comparing the degree of urbanization in areas both within and between cities and communities over time (Rothschild and Rockman 1982:13). One proposed measure evaluates urbanization in terms of population density. This measure can be correlated to intensity of land usage in an area over time. This correlation is measured by the following formula:

$$M1 = \frac{\text{square feet modified land}}{\text{square feet unmodified land}}$$

Modified land includes any space occupied by buildings, residential or commercial features, utilities, and streets. Agricultural modification (plowing, etc.) is not considered as modified land (Rothschild and Rockman 1982:13).

Another measure evaluates the percentage of modified space type (Rubertone 1982:120). The space types are defined by Rubertone as:

1. Residential (R) - any structure used solely as a dwelling

2. Commercial (C) - These include the following types of commercial properties:
   A. Shops - any establishment used to provide goods and services (e.g., grocery stores, retail bakeries)
   B. Industrial - any structure that houses businesses engaged in the production of goods (e.g., ironworks, bakery ovens)
   C. Storage facilities - any structure whose storage facilities are operated by a commercial business for a profit (e.g., warehouses)

3. Mixed residential/commercial (M) - any building shared by a commercial establishment and a residence

4. Outbuildings (O) - any auxiliary structures (e.g. barns, stables, shanties)

5. Unspecified (O) - any structure whose function can not be identified based on available historical information

6. Civic (Cv) - any structure used for civic and administrative purposes (e.g., schools, police stations, etc.)

7. Unoccupied (U) - any portion of land that is not occupied by structures, including both vacant land and potential land surfaces (e.g., land that is not covered by water, W)" (Rubertone 1982:120).

The space types and modification correlates (M1 factors) were computed for the entire study area (87,120 sq. ft., total area) over specific time periods (Table 7-37). The information was collected from an assortment of Sanborn Insurance maps on file at the North Carolina State Archives. Measurements were made by extrapolation on some of the earlier maps. Some information regarding outbuildings may also be absent from earlier maps.

Table 7-37: Land Usage, 31Wa656 (Lots 210 and 226), 1797-1988

Date	Space Type (sq. ft)	%	M1
1797	R = 1,050.0	1.21	.022
	O = 787.5	.90	
	U = 85,282.5	97.89	
	Tot = 87,120.0	100.00	
1847	R = 4,100.0	4.71	.055
	C = 437.5	.50	
	U = 82,582.5	94.79	
	Tot = 87,120.0	100.00	
1882	R = 7,440.0	8.54	.107
	O = 995.0	1.14	
	U = 78,685.0	90.32	
	Tot = 87,120.0	100.00	
1949	R = 25,689.0	29.49	1.082
	M = 4,244.0	4.87	
	Cv = 11,248.0	12.91	
	O = 4,090.0	4.70	
	U = 41,849.0	48.03	
	Tot = 87,120.0	100.00	
1988	Cv = 55,510.9	63.72	1.756
	U = 31,609.1	36.28	
	Tot = 87,120.0	100.00	

The figures in Table 7-37 show a very slow development of the land over time. The area stays strongly residential until after approximately 1950 when the land is used more intensively as civic space. The modification correlate (M1) remained low throughout the period in question.

These data were compared to two other areas within the original Raleigh grid system. The first area consists of Lots 174 and 175 and were associated with the White-Holman House (Hargrove 1985a). The property was originally bought by Benjamin Smith and Alex Martin in 1792. The property and existing structures were acquired in 1798 by William White, the first mayor of Raleigh and North Carolina's second Secretary of State. This property remained in the hands of the White Family until 1883 when it was divided into 10 smaller lots and sold at public auction (Hargrove 1985a:7). At least one of the lots was acquired at this time by William C. Holman, a prominent cotton and tobacco broker, lumber merchant, and textile company

executive. This portion of Lots 174 and 175 was retained by the Holman Family until 1968 when the City of Raleigh bought the property. Space types and modification correlates for these lots appear in Table 7-38.

Table 7-38: Land Usage, Lots 174 and 175, 1797-1988

Date	Space Type (sq. ft)	%	MI
1797	R = 2,968.0	3.41	.062
	O = 2,100.0	2.41	
	U = 82,052.0	94.18	
	Tot = 87,120.0	100.00	
1847	R = 1,285.0	1.48	.015
	U = 85,835.0	98.52	
	Tot = 87,120.0	100.00	
1882	R = 3,300.0	3.79	.047
	O = 600.0	.69	
	U = 83,220.0	95.52	
	Tot = 87,120.0	100.00	
1949	R = 24,490.0	28.11	.792
	O = 2,352.0	2.70	
	C = 11,654.0	13.38	
	U = 48,624.0	55.81	
	Tot = 87,120.0	100.00	
1988	Cv = 49,200.0	56.47	9.386
	C = 29,532.0	33.90	
	U = 8,388.0	9.63	
	Tot = 87,120.0	100.00	

Land modification proceeded at a much slower rate on Lots 174 and 175 when compared to the study area since the land remained for the most part residential and unmodified as late as 1950. Control of both lots by individual prominent families is the most apparent reason for this lack of development. Rapid land modification between 1949 and 1988 probably occurred after the area was acquired, in part, by the City of Raleigh in the 1960's.

A second comparison can be made with four more lots of the original Raleigh grid, Lots 128, 112, 129, 113, located due west of Moore Square (Hargrove 1985b). For comparative purposes these lots were divided in half to maintain continuity. Lots 128 and 112 were considered as one unit (87,120 sq. feet) and Lots 129 and 113 were considered as another. The lots were originally owned by James Mitchell, Thomas Blount, and Gabriel Holmes in 1792. During this time James Mitchell was the proprietor of Mitchell's Tavern and Ordinary, one of the first businesses in Raleigh. This establishment was located in Mitchell's home on lot 128. Blount and Holmes relinquished their holdings in the area by about 1817, and by the last half of the 19th century the four lot area included both residential and commercial types. Those in residence were solid middle-class. The

1880 census records the occupations of some of the inhabitants of this area:

1. M. Grausman, Jr. - merchant/grocer - Lot 128
2. Martha Ferrall - dressmaker - Lot 129
3. M.A. Parker - laundress - Lot 129
4. R. Smith - shoe maker - Lot 128

By the turn of the century the area had become extremely congested and of bad repute for its many saloons. This reputation was softened somewhat around 1914 when the City of Raleigh established the farmers' market on Martin Street across from Moore Square. The area became a focal point of Black-owned businesses during this time. The farmers' market moved to the northern periphery of Raleigh in the 1950s, after which time the area fell victim to high crime rates and other problems associated with center city decay. The area has just recently been the target of revitalization by the City of Raleigh (Hargrove 1985b). Space types and modification correlates for these lots appear in Tables 7-39 and 7-40.

Table 7-39: Land Usage, Lots 128 and 112, 1797-1988

Date	Space Type (sq. ft)	%	MI
1797	M = 2,195.0	2.52	.051
	O = 1,990.0	2.28	
	U = 82,935.0	95.20	
	Tot = 87,120.0	100.00	
1847	R = 4,110.0	4.72	.050
	U = 83,010.0	95.28	
	Tot = 87,120.0	100.00	
1882	R = 6,025.0	6.92	.166
	O = 400.0	.46	
	C = 6,000.0	6.89	
	U = 74,695.0	85.73	
	Tot = 87,120.0	100.00	
1949	R = 3,912.0	4.49	2.811
	O = 210.0	.24	
	C = 52,300.0	60.03	
	Cv = 7,840.0	9.00	
	U = 22,858.0	26.24	
	Tot = 87,120.0	100.00	
1988	Cv = 53,085.0	60.93	100.000
	C = 34,035.0	39.07	
Total	87,120.0	100.00	

This area experienced a rapid buildup after 1882. Presently these two lots are completely developed with no unmodified space visible. Part of this development has occurred as the result of urban renewal by the City of Raleigh.

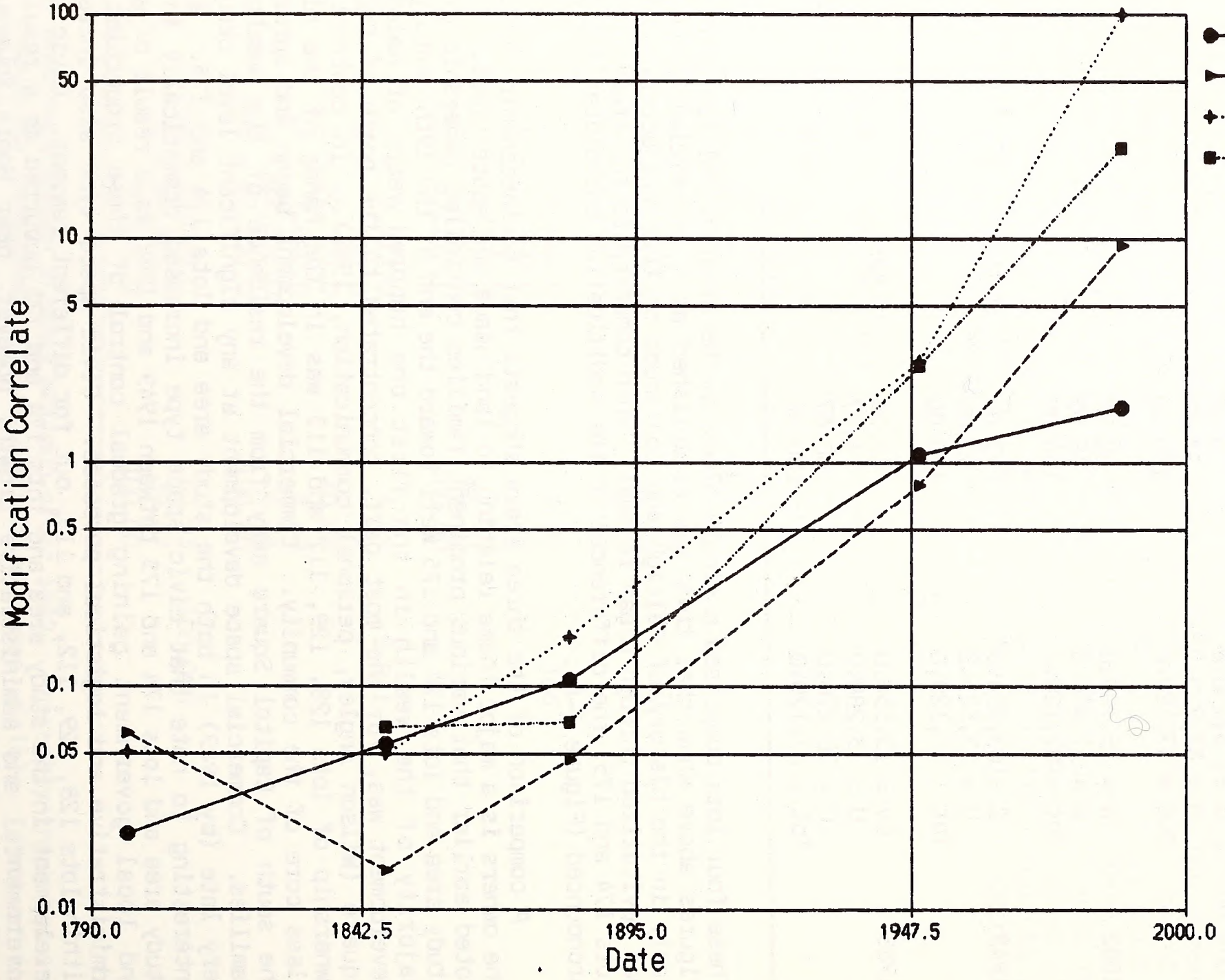
Table 7-40: Land Usage, Lots 129 and 113, 1797-1988

Date	Space Type (sq. ft)	%	Ml
1797	U = 87,120.0	100.00	0.000
1847	R = 2,250.0	2.58	.066
	C = 3,150.0	3.62	
	U = 81,720.0	93.80	
	Tot = 87,120.0	100.00	
1882	C = 35,700.0	40.98	.694
	U = 51,420.0	59.02	
	Tot = 87,120.0	100.00	
1949	C = 63,594.8	73.00	2.703
	U = 23,525.2	27.00	
	Tot 87,120.0	100.00	
1988	Cv = 13,554.0	15.56	25.496
	U = 3,288.0	3.77	
	C = 70,278.0	80.67	
	Tot = 87,120.0	100.00	

These four lots comprised a single block on the original Raleigh grid. The figures above show that this was established as a commercial block very early in the history of Raleigh and continued on that trajectory until it was revitalized through urban renewal. When compared to the study area and lots 174 and 175, the differences in the modification correlates are quite pronounced (Figure 7-4).

A comparison of the three areas suggests that socioeconomic status of the owners is a major theme relating to land usage and space types. It was noted earlier that various prominent families controlled ownership of the study area and lots 174 and 175 well toward the end of the 19th century. A majority of the wealth in the first one hundred years of Raleigh's development was, for the most part, concentrated to the north of Capitol Square (Wilson Angley, personal communication, 1988). In contrast the ownership of lots 128, 129, 112 and 113 was in the hands of the middle class core of the community. Commercial development began and spread to the south of Capitol Square away from the residence of the wealthier families. Commercial space development at any significant level occurred very late (by 1949) in both the study area and lots 174 and 175. It is interesting to note that civic space type increased dramatically in the study area and lots 174 and 175 between 1949 and 1988 as a result of state and local government gaining gradual control of these properties for administrative and logistical purposes. Civic space type also increased within lots 128, 129, 112, and 113, but for different reasons. Civic space development in the study area and lots 174 and 175 occurred as a result of governmental and administrative growth; however, near Moore Square the development was an effort to salvage the area from the ravages of urban decay.

Figure 7-4: Modification Correlates



Faunal Analysis

A total of 435 bone fragments with a corresponding weight of 455.59g, was recovered from excavation Trenches 1, 3, and 5 at 31Wa656 (See Table 7-41). Most of the faunal remains are bone and tooth fragments, although some whole bones were recovered. Overall, archaeological preservation of these materials is fair.

Table 7-41: Faunal Material, All Trenches

Unit	N	Weight(g)
Trench 1	4	35.35
Trench 2	425	392.46
Trench 3	6	27.78
Total	435	455.59

Trench 1

A total of four bone fragments was collected from Trench 1 (Table 7-42).

Table 7-42: Faunal Inventory, Trench 1

FS	Genus/ Species	Anatomy	N	Weight(g)/ Species
3	Bos taurus	Proximal humerus epiphysis fragment	1	34.30
		Humerus fragment	1	
	Unidentified	Misc. fragments	2	1.05

One Species, Bos taurus (domestic cow) was identified within Trench 1. See Table 7-43 for percentage totals.

Table 7-43: Percentage Totals, Trench 1

Unit	Genus/ Species	N	%	Weight(g)	Weight %
TR1	Bos taurus	2	50	34.30	97
	Unidentified	2	50	1.05	3
Total		4	100	35.35	100

Proximal humerus fragments, in association with Bos taurus, reflect cuts of beef with relatively high meat per bone value (Davidson 1982), when modern butchering methods are taken into account. However, the remains from Trench 1, FS3 are sufficiently eroded that evidence of conventional butchering techniques is absent.

Trench 2

A total of 425 bone fragments was collected from Trench 2 (Table 7-44).

Table 7-44: Faunal Inventory, Trench 2

FS	Genus/ Species	Anatomy	N	Weight(g)/ Species
FS1	Gallus gallus	Humerus fragments	6	
		Carpometa carpus fragments	5	
		Ulna fragments	7	
		Tibiatarsus fragment	1	
		Tarsometatarsus fragments	12	
		Radius fragments	4	
		Pelvis fragment	1	
		Sternum fragment	1	
		Vertebra	1	
		Coracoid fragment	1	
		Furculum fragment	2	29.20
	Meleagris gallopavo	Humerus fragment	1	
		Carpometacarpus fragment	1	
		Pelvis fragment	1	4.12
	Sus scrofa	Canine tooth fragment	1	
		Incisor teeth	2	
		Carpal	1	
		Humerus fragments	3	12.29
	Sylvilagus floridanus	Scapula fragments	2	.45
	Bos taurus	Scapula fragments	4	
		Rib fragment	1	
		Femoral epiphysis	1	
		Acetabular fragment	1	128.32
	Odocoileus virginianus	Vertebral fragments	5	
		Rib fragments	3	
		phalange fragment	1	8.59
	Neotoma floridana	Mandible with 2 molars	1	.20

Table 7-44: Faunal Inventory, Trench 2 (Cont.)

FS	Genus/ Species	Anatomy	N	Weight(g)/ Species
	Unidentified Shark	Tooth	1	.80
FS2	Sylvilagus floridanus	Cranial fragment	1	.31
	Sus scrofa	Tooth	1	1.00
	Bos taurus	Scapula fragment	1	.80
	Unidentified	Misc. fragments	6	2.20
FS3	Odocoileus virginianus	Vertebral fragment	1	1.80
	Unidentified	Misc. fragments	2	2.00
FS4	Equus caballus	Right proximal tibia epiphysis fragment	1	
		Tibia fragment	1	11.55
	Odocoileus virginianus	Left femur fragment	1	
		Rib fragments	2	19.34
	Sylvilagus floridanus	Cranial fragment	1	.01
	Unidentified bird	Long bone fragments	10	1.20
	Unidentified	Misc. fragments	45	2.70
FS6	Equus caballus	Right proximal tibia epiphysis	1	27.50
	Odocoileus virginianus	Rib fragments	2	
		Femur fragments	2	35.85
	Bos taurus	Ulna epiphysis	1	6.20

Table 7-44: Faunal Inventory, Trench 2 (Cont.)

FS	Genus/ Species	Anatomy	N	Weight(g)/ Species
	Sus scrofa	Rib fragments	2	
		Mandibular fragments	3	
		Mandibular fragment with teeth	1	
		Molar tooth	1	18.90
	Neotoma floridana	Incisor fragments	5	
		Third molar crown	1	
		Tibia fragment	1	
		Ulna fragment	1	
		Cranial fragment	1	.12
	Unidentified	Misc. Fragments	173	12.05
FS7	Bos taurus	Rib fragment	1	3.51
	Sus scrofa	Tooth fragments	2	2.20
	Odocoileus virginianus	Rib fragments	3	.95
	Unidentified	Misc. fragments	3	.20
FS8	Bos taurus	Tibia/longbone fragments	5	14.45
	Unidentified	Misc fragments	8	.30
FS9	Gallus gallus	Femur	1	
		Femur fragment	1	
		Proximal tibiotarsus fragment	1	
		Distal tibiotarsus fragments	1	
		Humerus	1	
		Humeral epiphysis fragment	1	10.10
	Sus scrofa	Rib fragment	4	
		Radial fragments	1	10.90

Table 7-44: Faunal Inventory, Trench 2 (Cont.)

FS	Genus/ Species	Anatomy	N	Weight(g)/ Species
FS10	Neotoma floridana	Longbone fragments	3	
		Incisor	1	
		Mandible with molar	1	.20
	Sciurus carolinensis	Distal tibia fragment	1	.55
	Unidentified	Misc. fragment	1	.38
FS11	Unidentified	Misc. fragment		

In all, ten species were identified in Trench #2, they include: Gallus gallus (domestic chicken), Meleagris gallopavo (domestic turkey), Bos taurus (domestic cow), Sus scrofa (domestic pig), Equus caballus (domestic horse), Sylvilagus floridanus (cottontail rabbit), Odocoileus virginianus (white-tail deer), Neotoma floridana (Eastern wood rat), Sciurus carolinensis (grey squirrel), and an unidentified species of shark. See Table 7-45 for species percentage totals.

Table 7-45: Percentage Totals, Trench 2

Genus/ Species	N	%	Weight(g)	Weight %
Gallus gallus	47	11.1	39.30	10.0
Meleagris gallopavo	3	.71	4.12	1.1
Bos taurus	15	3.5	153.28	39.1
Sus scrofa	22	5.2	45.29	11.5
Equus caballus	3	.72	39.05	10.0
Sylvilagus floridanus	4	.94	.76	.2
Odocoileus virginianus	20	4.7	66.53	17.0
Neotoma floridana	18	4.2	.52	.1
Shark	1	.2	.80	.2
Sciurus carolinensis	1	.2	.55	.1
Unidentified bird	10	2.4	1.2	.3
Unidentified other	281	66.1	41.06	10.5

The faunal assemblage in Trench 2 is a mixture of wild and domestic species which can be further broken down into two categories, food and non-food items. For the sake of this analysis Gallus gallus, Meleagris gallopavo, Bos taurus, Sus scrofa, Sylvilagus floridanus and Odocoileus virginianus

are considered food items; while Equus caballus, Neotoma floridana, Sciurus carolinensis (represented by a single bone), and the unidentified species of shark are classified as non-food items.

The identification of Equus caballus in the record is tenuous at best; its taxonomic integrity is plagued by a number of problems. There are three specimens identified as Equus caballus, a right proximal tibia epiphysis fragment and tibia shaft fragment associated with Trench 2 FS4, and another right proximal tibia epiphysis associated with Trench 2 FS6. The fragments from Trench 2, FS4 were, in part, identified using the epiphysis from Trench 2 FS6 which is a whole specimen, though badly eroded. The unfused epiphysis from Trench 2 FS6 was identified using the comparative faunal collections at the Wake Forest University Archeology Laboratories. It represents a juvenile individual, as suggested by the unfused condition of the epiphysis. Nevertheless, there is a degree of variability in epiphysis morphology between juvenile and adults of the same species (personal observation). Available to the recorder was an adult Equus caballus tibia; unfortunately, a Bos taurus tibia was not. However, literature and measurements on the post-cranial bones of Bos taurus (Olsen 1960) provided sufficient insight to recognize the remarkable similarity between the two species. Given the resources available, the distinction was made, Equus caballus. No butchering marks are apparent on the three specimens.

To enhance food pattern recognition in Trench 2, FS1, is treated separately from those FS's associated with the filling of the dairy feature located in FS's 3-11). Tables 7-46 and 7-47 list species percentage totals for this separation.

Table 7-46: Percentage Totals, Trench 2, FS1

Genus/ Species	N	%	Weight(g)	Weight %
Sus scrofa	7	6.3	12.29	6.0
Bos taurus	7	6.3	128.32	62.5
Gallus gallus	41	36.6	29.20	14.2
Meleagris gallopavo	3	2.7	4.12	2.0
Odocoileus virginianus	9	8.0	8.59	4.2
Sylvilagus floridanus	2	1.8	.45	.2
Neotoma floridana	1	0.9	.20	.1
Shark	1	0.9	.80	.4
Unidentified other	41	36.6	21.18	10.3
Total	112	100	205.15	100

Table 7-47: Percentage Totals, Trench 2 FS2-11

Genus/ Species	N	%	Weight(g)	Weight %
Sus scrofa	15	4.8	33.00	17.6
Bos taurus	8	2.6	24.96	13.3
Gallus gallus	6	1.9	10.10	5.4
Odocoileus virginianus	11	3.5	57.94	30.9
Sylvilagus floridanus	2	.6	.31	.2
Equus caballus	3	1.0	39.05	20.8
Neotoma floridanus	17	5.4	.32	.2
Sciurus carolinensis	1	.3	.55	.3
Unidentified bird	10	3.2	1.20	.6
Unidentified other	240	76.7	19.88	10.6
Total	313	100	187.31	100

As is apparent the two sets of data both represent an Urban diet pattern as defined by Reitz (1986). An Urban diet pattern contrasts with a Rural diet pattern in many respects. Comparatively they both include domestic and wild species. However, the urban diet is marked by the presence of more domesticated meats, from a wider variety of species, than its rural counterpart (Reitz 1986).

Also characteristic of urban food ways is the exploitation of a greater variety of domesticated birds (Reitz 1986). Present in the Trench 2 assemblage are Gallus gallus, Meleagris gallopavo, and other unidentified bird species; wild species are used less, with respect to the range of species exploited (Reitz 1986). The most common of undomesticated species

utilized at 31Wa656** is Odocoileus virginianus, and there is evidence that Sylvilagus floridanus was taken infrequently. The fact that these data show an urban diet pattern should come as no great surprise; nevertheless, another pattern emerges when the two sets are contrasted. It is posited that a good deal of stress is reflected by the faunal assemblage in Trench 2 FS2-FS11. This stress is manifested in several ways; the most obvious is the change in the representation of Odocoileus virginianus (white-tail deer). In Trench 2, FS2-FS11, white-tail deer constitutes 31.7% of the assemblage by weight. Evidently this at the expense of beef, representing 13.2% of the assemblage. There also appears to be a heavier reliance on Sus scrofa, representing 17.5% of the faunal assemblage by weight. Gallus gallus (domesticated chicken) seems uncharacteristically under represented in the FS2-11 record. Although it is 5.5% of the faunal assemblage, the fact that Gallus gallus is characterized by a low meat per bone ratio must be taken into account. Also in support of a stress hypothesis is the fact that the majority of the cuts in all of the food species are relatively poor, as evidence by the great proportion of vertebra, rib, mandible, phalange, and lower fore and hind limb fragments (Davidson 1982).

On the other hand, the faunal assemblage in Trench 2 FS1 (which may be associated with the final episode in the Faison residence) reflects a lessor degree of stress and the inventory percentages support this hypothesis. Odocoileus virginianus represents only 4.2% of the assemblage by weight; Bos taurus, 62.5% by weight; Sus scrofa, 6% by weight, and; Gallus gallus, 14.2% by weight. Conspicuously, fish remains are totally absent from both assemblages. This may or may not be due to the following factors: 1) .25" mesh screening failed to retain small fish bone fragments (although, no fish remains were recovered from the flotation samples either); 2) the preservation of fish bone was poor; 3) fish were processed, and their remains deposited elsewhere on the site; 4) fish were processed so as to eliminate bones (fillets), and/or 5) fish was not consumed.

The hypothesis that the faunal assemblage in Trench 2, FS2-FS11 represents an urban diet pattern under stress may be a valid one given the following assumptions: 1) both data sets represent statistically sound samples characterized by the total number and weight of faunal material and by the comparable number of species represented in each; 2) both samples represent the socio-economic circumstances of the time periods in which they were deposited; and, 3) both samples were deposited by agents of similar socio-economic status.

A total of six bone fragments, with a corresponding weight of 27.78g was recovered from Trench 5 (see Table 7-48).

Table 7-48: Faunal Inventory, Trench 5

FS	Genus/ Species	Anatomy	N	Weight(g)/ Species
1	Bos taurus	Rib fragment	1	
		Scapula fragment	1	26.47
	Odocoileus virginianus	Phalange fragment	1	.59
	Unidentified	Misc. fragments	3	.72

Two species were identified in Trench 5, Bos taurus and Odocoileus virginianus (see Table 7-49 for percentage totals).

Table 7-49: Percentage Totals, Trench 5

Unit	Genus/ Species	N	%	Weight(g)	Weight %
TR5	Bos taurus	2	33.3	26.47	95.3
	Odocoileus virginianus	1	16.7	.59	2.1
	Unidentified	3	50.0	.72	2.6
		6	100	27.78	100

Given the nature of disturbance inherent in Trench 5, and the general lack of faunal material, no sound conclusions may be derived from these data.

An alternative hypothesis concerning the apparent contradictions inherent in the Trench 2, FS1 assemblage and the Trench 2, FS2-FS11 assemblage, may be justified give the nature of the invertebrate faunal material (see Table 7-50).

Table 7-50: Invertebrate Faunal Inventory, All Trenches

Unit		N	Weight(g)
Trench 1:			
FS1:	Oyster shell	2	5.10
FS2:	"	3	8.00
FS3:	"	4	2.21
Trench 2:			
FS1:	Oyster Shell	23	28.46
FS2:	"	2	5.90
FS3:	"	9	12.91
FS4:	"	9+	196.20
FS5:	"	5	2.00
FS6:	"	14	264.40
FS7:	"	29	398.00
FS8:	"	12	126.10
FS9:	"	13+	212.10
FS10:	"	6	9.40
FS11:	"	0	0
FS12:	"	0	0
Trench 5:			
FS1:	Oyster Shell	0	0
FS2:	"	2	.70

All of the invertebrate shell is marine oyster, which is generally only available in cooler months. The fact that oyster shell is represented in quantity throughout Trench 2, FS2-FS11, suggests that depositions occurred during a winter or fall season. Also, it was often common for people to eat more soups and stews during winter (Davidson 1982). This could explain the poorer cuts of meat from the species represented in Trench 2, FS2-FS11. Furthermore, Davidson claims that pork was the seasonal choice over beef, due in part to its scarcity and poor curing attributes (1982). Another indicator of a winter diet pattern and deposit is the fact that no vegetal food remains were recovered; however, the same factors that applied to the absence of fish remains may be in effect on the absence of vegetal remains. Notwithstanding, an alternative hypothesis that may explain the differences in the record (Trench 2, FS1 :: Trench 2, FS2-FS11) is that variability in urban food patterns, associated with similar socio-economic conditions may be a result of seasonal fluctuation, as opposed to economic stress.

The Miscellaneous Group and Environmental Considerations

The Miscellaneous Group. A certain group of materials collected from the sample units (trenches) was weighed and not tabulated in terms of individual pieces. This group consists of the following items:

1. coal/charcoal
2. burned coal (clinkers)

3. wood fragments
4. miscellaneous rocks
5. miscellaneous melted glass
6. other miscellaneous pieces

Miscellaneous items are presented for the sample units in Tables 7-51 through 7-53. All measurements are in grams or, unless otherwise specified, in kilograms. Miscellaneous melted glass was distinguished from melted glass associated with the kitchen group on the basis of recognition of the glass as a once functional item, kitchen group, as opposed to amorphous globs of melted glass, miscellaneous melted glass.

Table 7-51: Miscellaneous Group, Trench 1

Item	FS1	FS2	FS3	N
Coal/Charcoal	3.9	17.7	3.6	25.2
Misc. Rock	5.9	5.8	43.6	55.3
Wood	0.0	25.1	.2	25.3

Table 7-52: Miscellaneous Group, Trench 2

	Item				
FS#	Coal Charcoal	Misc Rock	Wood	Clinkers	Misc. Melted Glass
1	88.0	30.5	37.5	9.0	0.0
2	7.0	13.8	138.6	8.9	3.7
3	0.0	3.4	76.3	4.7	0.0
4	21.4	802.3	779.6	0.0	0.0
5	13.8	0.0	102.0	3.8	0.0
6	34.2	2.38 kg	3.49 kg	3.3	0.0
7	55.7	0.0	837.0	19.4	0.0
8	449.1	3.09 kg	4.71 kg	10.5	0.0
9	1.18 kg	1.16 kg	1.29 kg	0.0	0.0
10	400.7	261.0	6.59 kg	56.8	0.0
11	0.0	824.0	998.1	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0
N	2.25 kg	8.57 kg	19.05 kg	116.4	3.7

Table 7-53: Miscellaneous Group, Trench 5

Item	FS1	FS2	N
Misc Rock	30.0	0.0	30.0
Clinkers	9.0	116.5	125.5

The large amount of wood present in FS's 2-12 (19.46 kg.) supports the assessment of the feature in Trench #2 as a dairy. It was characteristic of dairies in the 19th century to be lined with shelves for storage of perishables (Terry Harper and Bill McCrea, personal communication, 1988).

The largest amounts of wood were recovered from the last six field specimens, toward the bottom of the feature. Condition and appearance of the fragments resulted from heavy fill breaking down already collapsing shelving. This indicates that the dairy probably served as a functional part of one of the earlier households, prehaps Badger's or Ingles'. The feature was apparently filled with the intent to lay the cement floor as a part of some structural renovation episode which occurred sometime around 1900.

Environmental Considerations -- Parisitology. Soil samples were taken from three field specimens in Trench 2 and submitted to the State Laboratory of Public Health for epidemiologic testing. Approximately 16 oz. of soil were collected from FS #'s 8, 9, and 11 for testing. Laboratory tests found no parasites in any of the samples. According to a State health official it is rare to find evidence of parasites after a long period of time other than eggs or egg casings (George Robertson, personal communication, 1988). The results of these tests supported his assertion.

Synthesis of Data Analysis

The Data analaysis suggests that while the inhabitants of the structure(s) in Trench 2 enjoyed a relatively high socioeconomic status, represented by ceramic price scaling indicies (Miller 1980) and written historical information, the artifact patterns and faunal remais were indicative of agrarian, lower class society with a stressed diet of mixed wild and domestic foods. If transformation processes have not biased this assemblage, some explanation for these patterns may be offered in terms of the lifestyles of individuals living in the South during the 18th and 19th centuries.

North Carolina during the 18th and 19th centuries was composed of mainly a rural, agrarian society. Cities were relatively small and the economic base was agricultural. The lifestyles and behavioral patterns of individuals living in North Carolina would have been indicative of this setting. It is possible that the elite within Raleigh would also have had a natural tendency to cling to rural, agrarian lifestyles. The Piedmont tenant/yoement artifact pattern may not in this case indicate indigence, but rather the domestic behavior patterns of people living in a region adapted to rural lifestyles in small agrarianly-based communities. This pattern of behavior apparently cut across socioeconomic lines in terms of domestic behavior patterns and represented a general mode for the southern way of life during the 18th, 19th, an early 20th centuries.

CHAPTER EIGHT:
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

The purpose of this work was to collect data sufficient to determine the potential significance of archeological remains present within the study area. To achieve this five subsurface excavation units were dug to implement a non-probabilistic sampling design. This design was used to maximize the return on known resources. The primary goals of this project included:

A. Documentation of the presence or absence of intact cultural features within the study area.

B. A determination of the state of preservation of any intact cultural features located within the study area.

C. An assessment of any identified resources in terms of the National Register of Historic Places.

D. A determination of areas of inferred high and low probability in terms of the potential for the presence of intact cultural features.

E. The collection of data sufficient to make recommendations regarding further work at the site.

F. The collection of data sufficient to formulate research questions to guide further work, if warranted.

The secondary goals of this project included:

A. An assessment of land-use patterns over time within the core area of a political center.

B. The collection of data sufficient to make inferences regarding an affluent neighborhood during the late 18th and 19th centuries in Raleigh, North Carolina.

C. The collection of data sufficient to make inferences regarding the process of urbanization and its effect on the site over time.

Conclusions and Recommendations

The list of primary goals given at the beginning of this section will be discussed first. These goals will be addressed individually in terms of the results of excavation and analysis. Recommendations will be made regarding further work at 31Wa656**.

A. Documentation of the presence or absence of intact cultural features within the study area.

Five sample units were dug within the study area. Four of these units, 1, 3, 4, and 5, revealed highly disturbed stratigraphy and lacked any intact cultural features. Sample unit 2, on the other hand, revealed intact subsurface features. These features have been determined to include the remains of the foundations and basement of a structure which was destroyed in 1971. The results of the excavations strongly suggest that these remains incorporated at least one and maybe two earlier structures. The one known structure is that of George E. Badger, built in 1847. The floor plan of Trench 2 (Figure 6-4) shows a stone-lined walkway leading to an entranceway at the back of a structure. A 1896 Sanborn Insurance Map shows this exact configuration for the then intact Badger House. Seven years later the Sanborn Insurance map shows another structural configuration on the same spot which would have covered this walkway, incorporating it and the foundation into its basement (Angley and Crow 1988). Within the foundation another feature was discovered which consists of a plaster-lined dairy. This feature was filled in with debris and covered with hydraulic cement around 1900. The evidence from Trench 2 supports the conclusion that the cement floor was constructed when the configuration of the house changed, sometime between 1896 and 1903. The date the dairy was in use is assumed to have been between 1847 and an unspecified time before 1903. The dairy would appear to have functioned as an indoor feature of the Badger House. There is some speculation (Angley and Crow 1988) that the Badger House incorporated an earlier structure, possibly that of John Ingles (circa 1807). This of course raises the possibility that the dairy also functioned as a feature for that structure. Presently the answer to this question remains unknown.

B. A determination of the state of preservation of any intact cultural features located within the study area.

The preservation of the dairy feature in Sample Unit 2 was quite good. The structural remains of the feature, minus the shelving, were still intact. Most of the plaster on the walls remain in place. The bone and shell debris collected did not need preservative and were easily identifiable. The subterranean remains of the structure surrounding the dairy are also well preserved.

C. An assessment of any identified resources in terms of the National Register of Historic Places.

The methods used to carry out the fieldwork were designed to collect information adequate to formulate recommendations to the State Historic Preservation Officer and the North Carolina Museum of History regarding the National Register eligibility of 31Wa656**. Given the amount of disturbance revealed within Trenches 1,3,4, and 5, it is doubtful that any intact subsurface features remain in areas of the site other than Trench 2. The site in its present state does not fulfill any of the criteria for inclusion on the National Register of Historic Places.

D. A determination of areas of inferred high and low probability in terms of the potential for the presence of intact cultural features.

The areas of low probability include: 1) the parking lot, except for deep features such as wells, privies and deep cellars; 2) the areas immediately adjacent to the Bicentennial Mall; 3) the southeast corner of the study area (This area was severely disturbed by the YMCA); 4) the southwest corner of the study area; 5) the grassy median in the middle of the parking lot.

The areas of high probability include the grassy area surrounding Trench 2 (Figure 8-1).

E. The collection of data sufficient to make recommendations regarding further work at the site.

This project has collected enough data to recommend no further work in the area surrounding Trench 2 or within the area defined as 31Wa656**. It is recommended, however, that construction in the area, particularly during the early phases of the project, be monitored by a professional archeologist, for possible identification, recording and salvage recovery of features surviving in the graded parking lot and berm areas of the museum site.

Figure 8-1: 31Wa656**, High Probability Areas

N.C. Museum of History Project

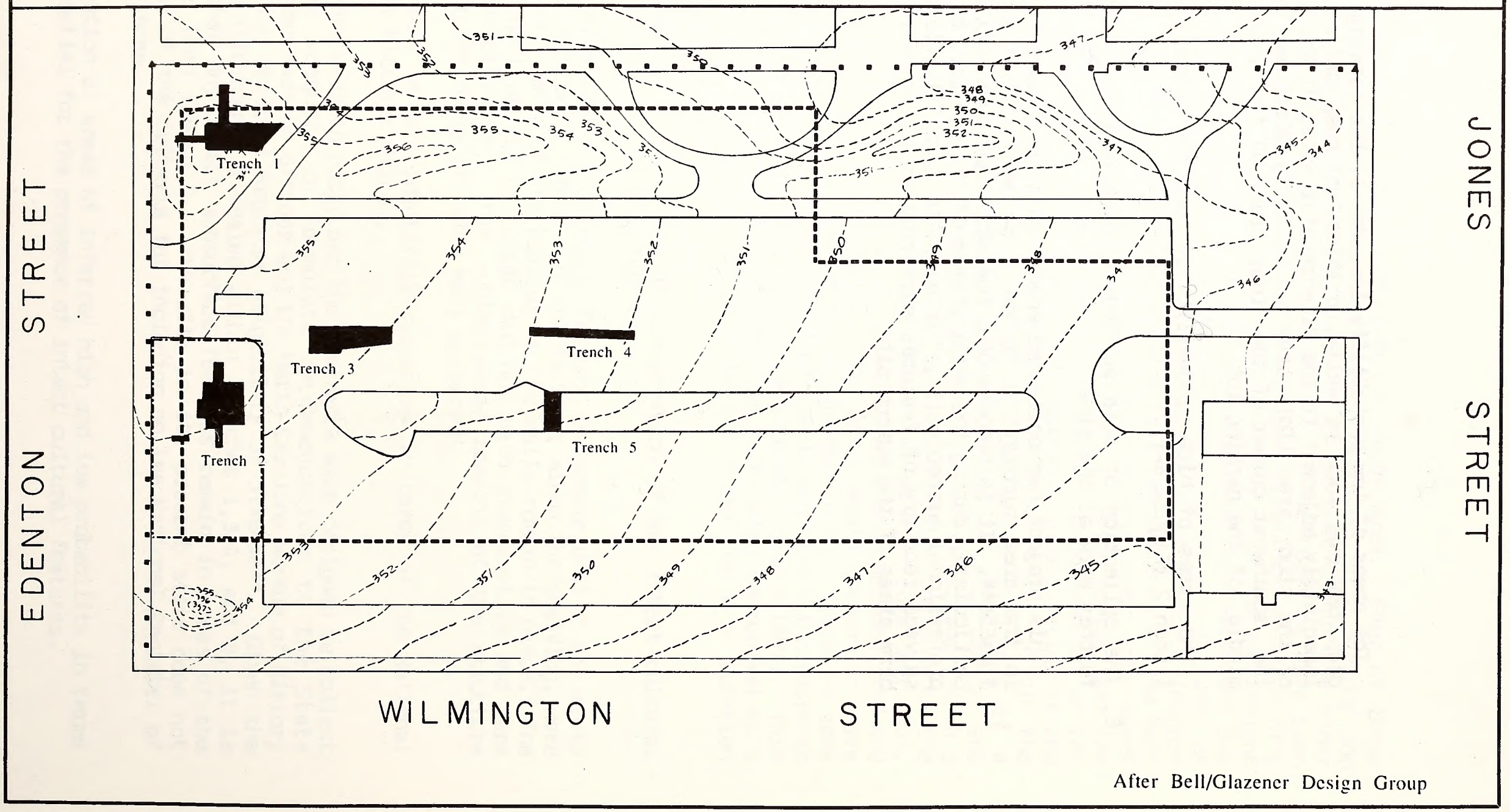
The Study Area, 31WA656

0 40 80

Feet

Proposed Building

High Probability Areas



After Bell/Glazener Design Group

A Discussion of the Secondary Goals

The first two secondary goals, A and B, have been discussed in some detail in Chapter Seven. The last of these goals, C, centered mainly around questions concerning the urbanization process and its effects, or better its manifestations, within the study area. As with any archeological investigation at the testing level, this project has produced as many additional questions as it has answered. These questions will be posed at the end of this section as a research design to guide further work in the high probability area of 31Wa656**.

The Urbanization Process: The Study Area as an Example

From the time of its inception Raleigh was a "planned" community. Raleigh is not located on a major river course, nor is it located in relation to any major natural resource; no major industry or port of trade conditioned its early development. The only reason behind the establishment of Raleigh as an urban center was its location as a central geographical point within the state of North Carolina. Initially, the only major industry was government. The decision to establish Raleigh's location resulted from an agreement between a few individuals at a state convention in the early 1790's to locate the state capital "somewhere near Isaac Hunter's Tavern" (Hargrove 1985b). What is described here is illustrative of a well known and central theme to theories regarding the organization and evolution of the state within complex societies (Service 1975). According to Zeder,

> "The state, which has been the object of the most explicit definitional attempts, has most commonly been linked either with the existence of centralized, hierarchical, and coercive governmental institutions or with stratified social organization" (1988:2).

Urbanism, often considered synonymous with the "state", has been viewed as the spatial manifestation of the process above when the variables of population aggregation and nucleation are taken into consideration (Zeder 1988).

The establishment of Raleigh as the state capital both symbolically and physically manifested some basic principles behind the development of the state (production specialization, redistribution of goods and services, centralization of authority, and concentration of wealth and power). Raleigh's founding also marked the beginning of an urban center whose purpose was the centralization of authority and the exportation of control. The great concentration of wealth and power in Raleigh certainly must have had an effect on its internal urban development.

The physical layout of the original Raleigh grid is symbolic of this idea of centralization of authority. The town was laid out on a grid system oriented on the cardinal directions. In its center was the state Capitol with the four major streets radiating outward, symbolically connecting the four corners of the state. State officials, in time, were required by law to reside in the capital city; therefore, a large number of some of the most powerful and influential people in the state were

concentrated in a central location. As a result the area grew, exporting government and aggregating a tremendous amount of wealth and power. It was not until the advent of a viable railroad system, connecting Raleigh to Virginia and later to Wilmington, New Bern, and beyond that the area began to grow commercially.

The archeological and historic records confirm the fact that individuals of high socioeconomic status inhabited the study area. A number of these people were involved in the workings of state and federal government, while others were influential in the commercial development of the state and local community. Comparisons of land usage have also shown that certain areas within the community developed along different paths in terms of space type, social setting, and deterioration. These findings exemplify one principle of the urban process as it applies to "western" societies, which involves the concentration and use of wealth and power as a determining force in the urbanization process. If urbanization is defined as the manifestation of population aggregation and nucleation in combination with formation of state level society and the control of a specialized economy (Zeder 1988), then this should be reflected in land use patterns. The way in which land is used should be determined by a very small group of individuals, those with wealth and power. Raleigh offers an excellent opportunity to study this phenomenon given its particular developmental history.

This idea is not new. It has been applied by human ecologists, neo-Marxists, and sociologists (McAdams 1980; Form 1954) to model present land use in modern capitalist societies; but rarely has this theme been applied to the archeological record to model the dynamics of urbanization. This approach to urban dynamics utilizes a power-conflict perspective. According to McAdams,

> "power/conflict analysts assert that wealth inequality means the urban land market is dominated by certain powerful actors, who do not move at random but who are tied into patterned social relations with one another. Thus, some actors have more influence on the development of cities than do others, shaping cities according to their own needs for profit, whether or not the needs of the public are met via land use" (1980:296-297).

This assumes that the profit motive is a basic driving force behind land use decisions and that social conflict occurs between the power brokers and the balance of the population. This assumption is supported by Cressey et al. who state,

> "As the nineteenth-century American economy shifted from commercial to industrial capitalism, urban social organization was altered by the continuous processes of group formation and conflict, resulting in changing status relationships between groups. Between 1750 and 1910, in Alexandria [Va.], as in other cities, the urban hierarchy was composed of changing status groups that can be defined empirically along socioeconomic, ethnic, and legal continua" (1982:43).

These results study suggest that this theme has been at work as part of the urbanization process of Raleigh. Two Raleigh core areas developed slowly toward commercialism while a third area developed rapidly and subsequently fell victim to urban decay (Hargrove 1985a and 1985b). These phenomena have been linked to control of certain areas of Raleigh by wealthy and influential families, whose properties remained residential longer while the middle and lower class areas of town experienced rapid development into space types other than residential.

A Suggested Research Design for Future Work

While no further work is recommended for the Museum of History project area, the work conducted at 31Wa656** lends itself to the formulation of a suggested research design for future studies within the city of Raleigh, which might focus on tests of two primary models: the power-conflict model (McAdams 1980) and the core-periphery model (Cressey et al. 1982). The power-conflict model has already been discussed. The core-periphery model is suggested because of its applicability on numerous levels of inquiry. On a microcosmic scale the historic core of a city can be divided into core, semiperipheral, and peripheral areas, corresponding geographically to socioeconomic and sociopolitical sections of the community. The core or economic center of the community should be more developed in terms of commercial space type while the periphery is less developed and more agricultural. According to the model, power brokers will operate from a semi-peripheral position to insure an open flow of capital between the core and the periphery. Using the power-conflict model it would be expected that the development of the Raleigh commercial core was at the expense of middle-class residential land -- a trend began very early in the history of Raleigh based on the land use pattern outlined by this study.

These models could be tested by additional archaeological and archival research within Raleigh, designed to collect data on material attribute and land use patterns. The material attributes and the inferred behavior of elite groups could then be compared to a body of data previously collected (e.g., Moore Square) to establish the archaeological characteristics of the different areas. Archival studies should focus on tracing the settlement patterns of the historic core of Raleigh in terms of land usage, on a scale much larger than attempted in this project. Together the archeological and archival data would allow evaluation of the two models, and generate a substantial block of comparative research data enhancing for future archeological studies within downtown Raleigh or similar urban areas.

Topics to be addressed in future studies of this type might include the following research questions:

1. What are the material attributes of the elite population elements in Raleigh during the 19th century?

2. How do these attributes compare to those suggested for the Moore Square excavations (Hargrove 1985b)?

3. What are the relationships among residential settlement patterns, material attribute patterns, and the behavior of different

socioeconomic and/or ethnic groups within the community of Raleigh? How have these changed over time?

4. How do land use patterns in the historic core of Raleigh compare to those predicted by using the core-periphery model of Cressey et al. (1982)?

5. How has government, considered as a major industry, affected the urban process in Raleigh? How has this been expressed in land use patterns?

6. Was Raleigh initially divided into socioeconomic "sectors" as predicted by the core-periphery model? If so, where were these boundaries located and how did they change over time?

7. Did the elite control the urban process in Raleigh? If so, how and where did this occur?

8. What effects did development of railroad and the Civil War have on the urbanization process?

9. Does the power-conflict model of McAdams (1980) apply to the urbanization process in Raleigh? If so, what general statements can be made regarding urban dynamics?

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